Chapter 1 Test A

MULTIPLE CHOICE

INSTRUCTIONS: The following selections relate to distinguishing arguments from nonarguments and identifying conclusions. Select the best answer for each.

1. There appears to be a growing happiness gap between men and women. Women today are working more and relaxing less, while men are working less and relaxing more. Forty years ago a typical woman spent 40 minutes more per week than the typical man performing an activity considered unpleasant. Today, with men working less, the gap is 90 minutes and growing.
   a. Argument; conclusion: Today ... the gap is 90 minutes and growing.
   b. Nonargument.
   c. Argument; conclusion: Forty years ago ... an activity considered unpleasant.
   d. Argument; conclusion: There appears to be ... between men and women.
   e. Argument; conclusion: Women today are working more and relaxing less.

   ANS: D PTS: 2

2. Lead is toxic, but do you know why? Lead is toxic mainly because it preferentially replaces other metals in biochemical reactions. In so doing it interferes with the proteins that regulate blood pressure (which can cause development delays in children and high blood pressure in adults), heme production (which can lead to anemia), and sperm production. Lead also displaces calcium in the reactions that transmit electrical impulses in the brain, which diminishes the ability to think and recall information.

   Anne Marie Helmstine, "Your Guide to Chemistry"
   a. Argument; conclusion: It interferes with the proteins ... and sperm production.
   b. Argument; conclusion: Lead is toxic.
   c. Nonargument.
   d. Argument; conclusion: It preferentially replaces other metals in biochemical reactions.
   e. Argument; conclusion: Lead also displaces calcium ... recall information.

   ANS: C PTS: 2

3. Aristotle focused on clarifying the concept of virtue itself. He argued that it was virtuous to choose the proper amount of emotion and/or action called for in a particular situation and that extremes of emotion and action were vices. In all communities there are some men of practical wisdom who have the capacity to judge wisely. Aristotle argued that they have the capacity to follow the "right rule" whatever the situation.

   David Cooper, *Value Pluralism and Ethical Choice*
   a. Argument; conclusion: In all communities ... capacity to judge wisely.
   b. Argument; conclusion: Aristotle focused on clarifying the concept of virtue itself.
   c. Argument; conclusion: They have the capacity to follow ... the situation.
   d. Argument; conclusion: He argued that it was virtuous ... were vices
   e. Nonargument.

   ANS: E PTS: 2

4. Illegal immigrants pay local sales taxes, and many of them also pay state, local, and federal income tax and Social Security tax. They also purchase items from local merchants, increasing the amount these merchants pay in taxes. In addition, they work for low salaries, which increases the earnings of their employers and the amount of taxes these employers pay. Thus, it is not correct to say that illegal immigrants contribute nothing to the communities in which they live.
   a. Argument; conclusion: It is not correct to say ... communities in which they live.

b. Argument; conclusion: They work for low salaries ... these employers pay.
c. Argument; conclusion: Illegal immigrants pay ... Social Security tax.
d. Argument; conclusion: They also purchase items ... pay in taxes.
e. Nonargument.

ANS: A PTS: 2

5. Numerous studies have indicated that women of color, black women in particular, are over-arrested, over-indicted, and over-sentenced. African-American women are seven times more likely to be arrested for prostitution than women of other ethnic groups. Black women have received significantly longer sentences for crimes against property and served longer periods in prison. For both murder and drug offenses, Euroamerican women ended up serving one-third less time for the same offenses than black women.

Nancy Kurshan, "Women and Imprisonment in the U.S."

a. Argument; conclusion: African-American women ... other ethnic groups.
b. Nonargument.
c. Argument; conclusion: For both murder and drug offenses ... black women.
d. Argument; conclusion: Numerous studies have indicated ... over-sentenced.
e. Argument; conclusion: Black women have received ... longer periods in prison.

ANS: B PTS: 2

6. It's even more important these days that your computer be protected by a firewall. There are criminal elements lurking in the shadows of cyberspace who send out probes to detect unprotected PCs. Once a vulnerable computer is found, these criminals install software that assists them in committing identity theft and fencing stolen IDs. They also defraud online advertisers by using these zombie computers to visit pay-per-click ads.
a. Argument; conclusion: There are criminal elements ... to detect unprotected PCs.
b. Argument; conclusion: Once a vulnerable computer ... fencing stolen IDs.
c. Nonargument.
d. Argument; conclusion: They also defraud ... to visit pay-per-click ads.
e. Argument; conclusion: It's even more important ... protected by a firewall.

ANS: E PTS: 2

7. The earth is of interest to astronomy for many reasons. Nearly all observations must be made through the atmosphere, and the phenomena of the upper atmosphere and the magnetosphere reflect the state of interplanetary space. The earth is also the most important object of comparison for planetologists.

Hannu Karttunen, *et al.*, *Fundamental Astronomy*

a. Argument; conclusion: The phenomena ... state of interplanetary space.
b. Argument; conclusion: The earth is also ... for planetologists.
c. Argument; conclusion: The earth is of interest to astronomy.
d. Nonargument.
e. Argument; conclusion: Nearly all observations ... through the atmosphere.

ANS: C PTS: 2

8. If the trade in tiger products is banned, tiger reserves are guarded by well equipped staff, communities abutting tiger habitat are given a stake in protecting tigers, and the makers of traditional medicines can be persuaded that tiger parts are not needed, then tiger poaching will be halted, habitat and life sustaining prey will be restored, and the immanent extinction of tigers in the wild will be averted.
a. Nonargument.
b. Argument; conclusion: The trade in tiger products is banned.
c. Argument; conclusion: Tiger poaching will be halted.
d. Argument; conclusion: The makers of traditional medicines ... not needed.

e. Argument; conclusion: Tiger poaching will be halted ... will be averted.

ANS: A PTS: 2

9. Humans are biological organisms. To understand our behavior and mental processes, we need to understand their biological underpinnings, starting with the cellular level, the neuron. How we feel, learn, remember, and think all stem from neuronal activity. So, how a neuron works and how neurons communicate are crucial pieces of information in solving the puzzle of human behavior and mental processing.

Richard Griggs, *Psychology: A Concise Introduction*

a. Argument; conclusion: To understand our behavior ... the neuron.
b. Argument; conclusion: Humans are biological organisms.
c. Argument; conclusion: How we feel ... neuronal activity.
d. Argument; conclusion: How a neuron works ... mental processing.
e. Nonargument.

ANS: D PTS: 2

10. Viruses are acellular entities too small to be seen with a light microscope. They are composed of a nucleic acid and a few proteins. Viruses replicate themselves and display other properties of living organisms only when they have invaded living cells. Indeed, some viruses can be crystallized and stored in a container on a shelf for years, but they retain the capacity to invade cells and cause disease.

Jacquelyn C. Black, *Microbiology: Principles and Explorations*

a. Argument; conclusion: They are composed of a nucleic acid and a few proteins.
b. Nonargument.
c. Argument; conclusion: Viruses are acellular entities ... microscope.
d. Argument; conclusion: Indeed, some viruses can be crystallized ... cause disease.
e. Argument; conclusion: Viruses replicate themselves ... invaded living cells.

ANS: B PTS: 2

11. Harnessing the clean, abundant energy of the sun and wind is critical to solving the global warming problem. Technological advances have brought the cost of electricity generated by the wind down by 82 percent since 1981. Solar energy technology has made remarkable progress as new photovoltaic cells have been developed to convert even greater amounts of sunlight directly into electricity. Today the costs of wind and solar power are becoming competitive with dirty coal-fired plants.

Sierra Club, "Global Warming Solutions"

a. Argument; conclusion: Today the costs of wind ... dirty coal-fired plants.
b. Argument; conclusion: Technological advances ... by 82 percent since 1981.
c. Argument; conclusion: Harnessing the clean ... the global warming problem.
d. Nonargument.
e. Argument; conclusion: Solar energy technology ... directly into electricity.

ANS: D PTS: 2

12. It is likely that innocent prisoners in this country have been executed for crimes they did not commit. From 1973 until 2007, 124 death row inmates have been exonerated. In many of these cases DNA evidence played a crucial role. Yet, in that same time frame, more than 1000 prisoners were executed. For many of these prisoners no DNA evidence was available. If such evidence had been available, how may more would have been exonerated?

a. Argument; conclusion: In many of these cases ... played a crucial role.
b. Nonargument.
c. Argument; conclusion: From 1973 ... have been exonerated.
d. Argument; conclusion: For many of these prisoners ... was available.
e. Argument; conclusion: It is likely that innocent prisoners ... they did not commit.

ANS: E PTS: 2

13. Some over-the-counter medicines should not be given to very young children. For example, cold medicines contain decongestants and antihistamines. These substances raise blood pressure and heart rate. If an overdose should occur in a young child, the result can be fatal.
    a. Argument; conclusion: Some over-the-counter medicines ... very young children.
    b. Argument; conclusion: These substances raise blood pressure and heart rate.
    c. Argument; conclusion: If an overdose ... the result can be fatal.
    d. Argument; conclusion: Cold medicines contain decongestants and antihistamines.
    e. Nonargument.

    ANS: A PTS: 2

14. The world-wide disappearance of frogs may be the result of agricultural runoff. Scientists have shown that runoff rich in fertilizer causes a pronounced increase in the algae of lakes and ponds. Snails then gorge themselves on the algae, causing parasites living inside them to produce huge quantities of eggs. When the eggs hatch, the parasites infect young frogs, causing severe deformation of their limbs.
    a. Nonargument.
    b. Argument; conclusion: Snails then gorge themselves ... huge quantities of eggs.
    c. Argument; conclusion: The world-wide disappearance ... agricultural runoff.
    d. Argument; conclusion: When the eggs hatch ... severe deformation of their limbs.
    e. Argument; conclusion: Scientists have shown ... in the algae of lakes and ponds.

    ANS: C PTS: 2

15. Little is known of the Greek physician Hippocrates, who lived around 400 B.C. Nevertheless, the writings attributed to him have provided a number of principles underlying modern medical practice. One of his most famous contributions, the Hippocratic Oath, is the foundation of contemporary medical ethics. It requires the physician to swear that he or she will help the sick, refrain from intentional wrongdoing, and keep confidential all matters pertaining to the doctor-patient relationship.

    William C. Cockerham, *Medical Sociology*
    a. Argument; conclusion: The writings attributed to him ... medical practice.
    b. Nonargument.
    c. Argument; conclusion: It requires the physician ... doctor-patient relationship.
    d. Argument; conclusion: One of his most famous contributions ... medical ethics.
    e. Argument; conclusion: Little is known ... who lived around 400 B.C.

    ANS: B PTS: 2

16. Two million children have been killed in armed conflicts in the last decade. Three times as many have been injured or permanently disabled. Millions of others have been forced to take part in or witness horrifying acts of violence. In countless cases the impact of armed conflict on children's lives remains invisible. The children themselves may be removed from the public, in institutions, or survive as victims of prostitution. But those who have lost parents often experience humiliation, rejection and discrimination, and suffer in silence as their self-esteem crumbles.

    Child Rights Information Network
    a. Nonargument.
    b. Argument; conclusion: Two million children ... in the last decade.
    c. Argument; conclusion: But those who have lost parents ... self-esteem crumbles.
    d. Argument; conclusion: In countless cases ... remains invisible.
    e. Argument; conclusion: Three times as many ... permanently disabled.

    ANS: A PTS: 2

17. An element is a collection of atoms of the same type. Each atom contains three fundamental particles—a proton, a neutron, and an electron. The protons and neutrons are in the center, or nucleus, of the atom. Protons have a positive charge, while neutrons have no electric charge. The electrons have a negative charge and orbit about the nucleus at a specific distance.

Edward F. Albin, *Earth Science Made Easy*

a. Argument; conclusion: An element is a collection of atoms of the same type.
b. Argument; conclusion: The electrons have a negative charge ... specific distance.
c. Nonargument.
d. Argument; conclusion: Each atom contains ... an electron.
e. Argument; conclusion: The protons and neutrons ... of the atom.

ANS: C PTS: 2

INSTRUCTIONS: The following problems relate to identifying and evaluating inductive and deductive arguments. Select the best answer for each.

18. If the Big Bang theory is correct, then the universe is billions of years old. And if the Big Bang theory is correct, then the universe was not created in six days. Thus, if the universe is billions of years old, then it was not created in six days.
a. Deductive, valid.
b. Inductive, strong.
c. Inductive, cogent.
d. Inductive, weak.
e. Deductive, invalid.

ANS: E PTS: 2

19. The engraved plate beneath this painting in the art museum says "Monet." Therefore, the painting must be the work of Monet.
a. Inductive, cogent.
b. Inductive, weak.
c. Deductive, valid.
d. Inductive, strong.
e. Deductive, invalid.

ANS: D PTS: 2

20. Canada is similar in many ways to the United States. Both countries share the same language, values, and a free market economy. Also, they share a common border. Therefore, the Canadian flag must look a lot like the U.S. flag.
a. Inductive, weak.
b. Deductive, invalid.
c. Inductive, strong.
d. Deductive, sound.
e. Deductive, valid.

ANS: A PTS: 2

21. Either Bill Clinton or George W. Bush was president when the World Trade Center towers were destroyed. But Bush was not president at that time. Therefore, Bill Clinton was president when those buildings were destroyed.
a. Inductive, invalid.
b. Deductive, valid.
c. Deductive, invalid.
d. Inductive, strong.

e. Inductive, weak.

ANS: B PTS: 2

22. As the universe expands, it gets colder and colder. Furthermore, this expansion will continue for ever and ever. Therefore, at some point in the future the universe will become too cold to support human life, and all humans will perish.
a. Deductive, invalid.
b. Deductive, valid.
c. Deductive, sound.
d. Inductive, strong.
e. Inductive, weak.

ANS: D PTS: 2

23. No drug cartels are legal operations, so no legal operations are enterprises that engage in smuggling, because all drug cartels are enterprises that engage in smuggling.
a. Deductive, valid.
b. Inductive, strong.
c. Inductive, weak.
d. Deductive, sound.
e. Deductive, invalid.

ANS: E PTS: 2

24. Given that $x^2 + 2x = 15$. It follows that $x = 3$.
a. Inductive, strong.
b. Inductive, weak.
c. Deductive, valid.
d. Inductive, cogent.
e. Deductive, invalid.

ANS: C PTS: 2

25. Graffiti painted on that vacant building says "Boycott Meat." Therefore, it's clear that we should all become vegetarians.
a. Deductive, sound.
b. Inductive, weak.
c. Deductive, invalid.
d. Deductive, valid.
e. Inductive, strong.

ANS: B PTS: 2

26. James Bloomfield, the widely respected expert on art authentication, says that the painting recently discovered in the basement of the art museum is a genuine Picasso. Therefore, we conclude that the painting is indeed a genuine Picasso.
a. Deductive, invalid.
b. Inductive, weak.
c. Deductive, valid.
d. Inductive, cogent.
e. Inductive, strong.

ANS: E PTS: 2

27. Astrological calculations indicate that the U.S. stock market will crash in the year 2014. Therefore, you should get your money out of the market before that year.
    a. Inductive, cogent.
    b. Deductive, valid.
    c. Inductive, weak.
    d. Deductive, invalid.
    e. Inductive, strong.

    ANS: C PTS: 2

28. If organic food contains pesticides, then consumers are misled. Organic food does not contain pesticides. Therefore, consumers are not misled.
    a. Inductive, weak.
    b. Inductive, strong.
    c. Deductive, valid.
    d. Deductive, invalid.
    e. Deductive, sound.

    ANS: D PTS: 2

29. When Jack took his car in for service, the mechanic charged him for lots of work that didn't need to be done. The same thing happened to Niki and Claire. Apparently mechanics these days are just a bunch of crooks.
    a. Inductive, strong.
    b. Inductive, weak.
    c. Deductive, invalid.
    d. Deductive, valid.
    e. Deductive, sound.

    ANS: B PTS: 2

30. All aerobic exercises are calorie burners and all calorie burners are weight reducers. Thus, all aerobic exercises are weight reducers.
    a. Deductive, valid.
    b. Deductive, invalid.
    c. Inductive, weak.
    d. Inductive, strong.
    e. Inductive, cogent.

    ANS: A PTS: 2

31. After hearing Jordan's speech in the student council, Michael rolled his eyes and shook his head. Apparently Michael didn't agree with what Jordan said.
    a. Deductive, valid.
    b. Deductive, sound.
    c. Deductive, invalid.
    d. Inductive, weak.
    e. Inductive, strong.

    ANS: E PTS: 2

32. Brandon is a polytheist. Therefore, he believes in more than one god.
    a. Inductive, cogent.
    b. Deductive, invalid.
    c. Inductive, weak.

d. Deductive, valid.
e. Inductive, strong.

ANS: D PTS: 2

33. Given that figure *A* is a triangle, and one of its sides has a length of 1 foot. It follows that its area is less than 1 square foot.
a. Inductive, weak.
b. Deductive, valid.
c. Deductive, invalid.
d. Deductive, sound.
e. Inductive, strong.

ANS: C PTS: 2

34. After buying a pair of Blue Atlas jeans, Carter was disappointed to find that they fell apart after only one month. The same think happened to Jeff, Mario, and Ralph. Apparently Blue Atlas jeans don't hold up very well.
a. Inductive, strong.
b. Inductive, cogent.
c. Deductive, invalid.
d. Inductive, weak.
e. Deductive, valid.

ANS: A PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

35. Which of the following are all premise indicators?
a. For, because, consequently.
b. Inasmuch as, thus, Accordingly.
c. Consequently, hence, thus.
d. Since, given that, because.
e. Given that, for the reason that, wherefore.

ANS: D PTS: 2

36. Which of the following are all arguments?
a. Illustrations, syllogisms, explanations.
b. Predictions, categorical syllogisms, arguments from signs.
c. Warnings, conditional statements, statements of belief.
d. Expository passages, reports, pieces of advice.
e. Propositions, analogies, inferences.

ANS: B PTS: 2

37. Which of the following are all deductive arguments?
a. Hypothetical syllogisms, disjunctive syllogisms, arguments based on mathematics.
b. Generalizations, predictions, causal inferences.
c. Arguments from authority, disjunctive syllogisms, predictions.
d. Arguments from authority, generalizations, Arguments from analogy.
e. Arguments based on signs, causal inferences, arguments in science.

ANS: A PTS: 2

38. An argument whose conclusion rests on some geometrical procedure is:

a. A strong argument.
b. An inductive argument.
c. A deductive argument.
d. A valid argument.
e. A sound argument.

ANS: C PTS: 2

39. An argument whose conclusion rests on a similarity between two things or situations is:
a. A valid argument.
b. An inductive argument.
c. A sound argument.
d. A cogent argument.
e. A deductive argument.

ANS: B PTS: 2

40. In the expression "The moon sends forth light because it reflects light from the sun," the statement "The moon sends forth light" is called the:
a. Explanandum.
b. Consequent.
c. Explanans.
d. Conclusion.
e. Premise.

ANS: A PTS: 2

41. In the expression "If a nation engages in torture, then it loses moral authority in the world community," the statement "A nation engages in torture" is called the:
a. Conclusion.
b. Consequent.
c. Conditional.
d. Explanandum.
e. Antecedent.

ANS: E PTS: 2

42. Which of the following is a sufficient condition for committing a crime?
a. Having a good lawyer.
b. Going to jail.
c. Avoiding the police.
d. Robbing a bank.
e. Signing a confession.

ANS: D PTS: 2

43. Which of the following is a necessary condition for playing baseball?
a. Being able to run the bases faster than the other players.
b. Being able to catch a fly ball.
c. Having a bat.
d. Being able to steal a base.
e. Having an umpire.

ANS: C PTS: 2

44. If a deductive argument has one true premise and a true conclusion, then we know:

a. Nothing as such about the argument's validity.
b. The argument is invalid.
c. The argument is valid.
d. The argument is weak.
e. The argument is uncogent.

ANS: A PTS: 2

PROBLEM

INSTRUCTIONS: The following problems relate to the counterexample method.

1. **PART A**
Some cashmere sweaters are fashionable garments, so some cashmere sweaters are not suede jackets, for some suede jackets are not fashionable garments.

Which of the following correctly expresses the form of this argument?

a. Some C are F.
Some C are not S.
Some S are not F.

b. Some S are not F.
Some C are F.
Some C are not S.

c. Some S are not F.
Some C are not S.
Some C are F.

d. Some F are not S.
Some F are C.
Some S are not C.

e. Some C are F.
Some F are not S.
Some C are not S.

PART B
Which of the following substitutions proves the argument invalid?
a. C = animals, F = cats, S = mammals.
b. C = dogs, F = animals, S = mammals.
c. C = dogs, F = mammals, S = fish.
d. C= mammals, F = animals, S = dogs.
e. C = cats, F = mammals, S = animals.

ANS:
Part A: b
Part B: e

PTS: 4

2. **PART A**
If cell phone companies screen text messages, then freedom of speech is threatened. Thus, freedom of speech is not threatened, because cell phone companies do not screen text messages.

Which of the following correctly expresses the form of this argument?

a. If C then F.
C.
F.

b. Not F.
Not C.
If C then F.

c. All C are F.
C.
F.

d. If C then F.
Not C.
Not F.

e. If C then F.
Not F.
Not C.

PART B

Which of the following substitutions proves the argument invalid?

a. C = Abraham Lincoln was assassinated, F = George Washington was assassinated.
b. C = Joe Smith was beheaded, F= Joe Smith is dead.
c. C = Abraham Lincoln was beheaded, F = Abraham Lincoln is dead.
d. C = Abraham Lincoln was assassinated, F = Abraham Lincoln is dead.
e. C = Abraham Lincoln was beheaded, F = Abraham Lincoln is not dead.

ANS:
Part A: d
Part B: c

PTS: 4

3. **PART A**

All container ships that are ocean going are air polluters. Hence, all container ships are air polluters.

Which of the following correctly expresses the form of this argument?

a. All C are A.
All C are O.

b. All C are A.
All C that are O are A.

c. All CS are O.
All CS are A.

d. All C are O.
All C are A.

e. All C that are O are A.
All C are A.

PART B

Which of the following substitutions proves the argument invalid?

a. C = husbands, O = married, A = men.
b. C = men, O = humans, A = mammals.
c. C = men, O = married, A = husbands.
d. C = wives, O = divorced, A = women.
e. C = cats, O = animals, A = dogs.

ANS:
Part A: e
Part B: c

PTS: 4

Chapter 1 Test B

MULTIPLE CHOICE

INSTRUCTIONS: The following selections relate to distinguishing arguments from nonarguments and identifying conclusions. Select the best answer for each.

1. Authoritarian states are characterized by strong central governments that fairly stringently limit the range of political activity. More often than not, they are one-party states, which means that only one party, that which supports the government, is allowed to engage in political activity. Free discussion and association are strictly curtailed in these systems. Anyone who might dare to criticize the government or to express ideas that are not in conformity with its policies can be severely punished, even by death.

   Robert A. Heineman, *Political Science*

   a. Argument; conclusion: More often than not ... engage in political activity.
   b. Nonargument.
   c. Argument; conclusion: Authoritarian states ... limit the range of political activity.
   d. Argument; conclusion: Anyone who might dare to criticize ... even by death.
   e. Argument; conclusion: Free discussion and association ... in these systems.

   ANS: B PTS: 2

2. Prior to their extinction, Neanderthals had been widespread in Europe for 100,000 years. Then 50,000 years ago, modern humans moved into Europe from Africa. Twenty-six thousand years after that the last Neanderthal died. At one time it was thought that the Neanderthals were killed by climate change, but this theory has now been discounted. So why did the Neanderthals perish? Probably they were killed by the humans.
   a. Argument; conclusion: Then 50,000 years ago ... Europe from Africa.
   b. Argument; conclusion: At one time it was thought ... now been discounted.
   c. Argument; conclusion: Prior to their extinction ... 100,000 years.
   d. Nonargument. Twenty-six thousand years after that the last Neanderthal died.
   e. Argument; conclusion: Probably they were killed by the humans.

   ANS: E PTS: 2

3. Hair turns color when we age because the follicles at the base of the hair shaft cease to produce melanin. Melanin is a chemical that gives the hair shaft its color (black, brown, blond, red, and all shades in between). The darkness or lightness of your hair depends on how much melanin each strand contains. With age, the cells in the follicle that produce melanin die off. As they do so, that hair strand will become silver, grey, or white, as it grows.
   a. Argument; conclusion: The follicles ... cease to produce melanin.
   b. Argument; conclusion: Hair turns color when we age.
   c. Argument; conclusion: With age, the cells in the follicle ... die off.
   d. Nonargument.
   e. Argument; conclusion: The darkness or lightness ... each strand contains.

   ANS: D PTS: 2

4. Evolution as a process that has always gone on in the history of the earth can be doubted only by those who are ignorant of the evidence or are resistant to evidence, owing to emotional blocks or to plain bigotry. By contrast, the mechanisms that bring evolution about certainly need study and clarification. There are no alternatives to evolution as history that can withstand critical examination. Yet we are constantly learning new and important facts about evolutionary mechanisms.

a. Nonargument.
b. Argument; conclusion: By contrast, the mechanisms ... study and clarification.
c. Argument; conclusion: Yet we are constantly ... evolutionary mechanisms.
d. Argument; conclusion: Evolution as a process ... blocks or to plain bigotry.
e. Argument; conclusion: There are no alternatives ... critical examination.

ANS: A PTS: 2

5. Scientists have recently shown that heaps of intact DNA from the extinct wooly mammoth are retrievable from the animals' fur. A great deal of that fur is readily available in natural history museums. Such amounts of DNA make it possible to piece together the entire mammoth genome. Hence, we can expect to see mammoth clones in the not too distant future.
a. Argument; conclusion: A great deal of that fur ... natural history museums.
b. Nonargument.
c. Argument; conclusion: Scientists have recently shown ... animals' fur.
d. Argument; conclusion: We can expect to see ... in the not too distant future.
e. Argument; conclusion: Such amounts of DNA ... the entire mammoth genome.

ANS: D PTS: 2

6. The loss of arctic ice is accelerating as a result of a form of positive feedback. As arctic ice melts, the arctic icecap reflects fewer rays from the sun. When this happens, more rays are absorbed by the surrounding ocean, which increases its temperature. As the temperature of the ocean rises, more arctic ice melts.
a. Argument; conclusion: When this happens ... which increases its temperature.
b. Argument; conclusion: As the temperature of the ocean rises ... ice melts.
c. Argument; conclusion: The loss of arctic ice ... positive feedback.
d. Nonargument.
e. Argument; conclusion: As arctic ice melts ... fewer rays from the sun.

ANS: C PTS: 2

7. If its ion engine operates as planned, its huge solar panel remains deployed and undamaged, and its xenon energy source is not exhausted, then the Dawn spacecraft will reach both Vesta and Ceres (large asteroids in the belt between Mars and Jupiter), and scientists will gather information about the formation of planets, whether Ceres has a buried ocean of fresh water, and whether vestiges of life lurk beneath its icy surface.
a. Argument; conclusion: Its ion engine operates ... not exhausted.
b. Argument; conclusion: The Dawn spacecraft ... Mars and Jupiter)
c. Argument; conclusion: The Dawn spacecraft ... beneath its icy surface.
d. Argument; conclusion: Scientists will gather information ... formation of planets.
e. Nonargument.

ANS: E PTS: 2

8. To focus on the performance of the stock market is to zero in on an economic indicator that can do well even as the country does poorly. In 2006, for instance, the Dow Jones industrial average hit highs. According to the just released census data, however, median earnings fell one percent, and millions more Americans entered the ranks of the uninsured. Indeed, from 2000 to 2007 the S&P 500 gained more than 500 points. Meanwhile, the median household income fell by more than $900.

Ezra Klein, "Stock Split"

a. Argument; conclusion: According to the just released ... ranks of the uninsured.
b. Argument; conclusion: To focus on the performance ... the country does poorly.

c. Argument; conclusion: In 2006, for instance, the Dow Jones ... hit highs.
d. Argument; conclusion: Meanwhile ... fell by more than $900.
e. Nonargument.

ANS: B PTS: 2

9. The earth is divided into the crust, the mantle, and the core. The crust is the solid portion on which we stand. The mantle is a plastic but solid material under the crust that can flow and move about. And finally, the core is the innermost part of the earth made of solid and molten iron.

Pam Walker and Elaine Wood, *Hands-On General Science Activities*

a. Argument; conclusion: The mantle ... flow and move about.
b. Argument; conclusion: The crust is the solid portion on which we stand.
c. Nonargument.
d. Argument; conclusion: The core is the innermost part ... molten iron.
e. Argument; conclusion: The earth is divided into the crust, the mantle, and the core.

ANS: C PTS: 2

10. The relationship between two measurable factors can be represented by a graph. If both values increase, they are considered to have a direct relationship. For example, the more you work, the more money you make. If one value increases while the other decreases, they have an inverse relationship. For example, the more you work on your golf swing, the lower your score will be.

Scott Ryan, *Earth Science*

a. Nonargument.
b. Argument; conclusion: If one value increases ... an inverse relationship.
c. Argument; conclusion: The relationship ... can be represented by a graph.
d. Argument; conclusion: For example, the more you work ... money you make.
e. Argument; conclusion: If both values increase ... direct relationship.

ANS: A PTS: 2

11. Scientists may be on the verge of creating life in a test tube. Recently, scientists have used computers to synthesize a highly complex loop of DNA. When this loop was inserted into an empty bacterial cell, the cell began to self-replicate. And self-replication is an essential feature of life.
a. Argument; conclusion: When this loop was inserted ... began to self-replicate.
b. Argument; conclusion: Recently, scientists have used computers ... loop of DNA.
c. Nonargument.
d. Argument; conclusion: Scientists may be on the verge ... life in a test tube.
e. Argument; conclusion: And self-replication is an essential feature of life.

ANS: D PTS: 2

12. Good intentions aside, there are compelling reasons to avoid water fluoridation. Hydrofluosilic acid, the industrial waste product used in municipal water systems, is contaminated with arsenic, lead, and other heavy metals. There are significant increases in lead levels in children who drink fluoridated water. A 2006 Harvard study found a fivefold to sevenfold increase in bone cancer in exposed young men. Sadly, the youngest children are the most susceptible.

David S. Banks, Letter to the Editor

a. Argument; conclusion: Hydrofluosilic acid ... and other heavy metals.
b. Argument; conclusion: Sadly, the youngest children are the most susceptible.
c. Argument; conclusion: There are compelling reasons to avoid water fluoridation.
d. Argument; conclusion: There are significant increases ... fluoridated water.
e. Nonargument.

ANS: C PTS: 2

13. While there is no technology to reduce CO_2 from a car's exhaust, we can make cars pollute less by making them more fuel efficient. By using today's best technology, car makers could dramatically increase the fuel economy of their cars and trucks. In fact, off-the-shelf technology can change the nation's best selling SUV, the Ford Explorer, from a 19 mpg gas guzzler to an efficient 34 mpg vehicle. If we are to make any progress in slowing global warming, we must make our cars go farther on a gallon of gas.

Sierra Club, "Global Warming Solutions"

a. Argument; conclusion: While there is no technology ... more fuel efficient.
b. Nonargument.
c. Argument; conclusion: In fact, off-the-shelf technology ... 34 mpg vehicle.
d. Argument; conclusion: By using today's best technology ... cars and trucks.
e. Argument; conclusion: If we are to make any progress ... a gallon of gas.

ANS: B PTS: 2

14. Developing an AIDS vaccine is not impossible, as some skeptics claim. Research suggests that the human immune system is better at fighting HIV than was originally thought. Most of those infected suppress the virus for years without developing AIDS. A small number never contract the virus despite repeated exposures. If we can figure out the mechanism that accounts for this, we'll have clues about how to engineer a vaccine.

Seth Berkley, "Don't Quit on an AIDS Vaccine"

a. Argument; conclusion: If we can figure out the mechanism ... engineer a vaccine.
b. Nonargument.
c. Argument; conclusion: Most of those infected ... without developing AIDS.
d. Argument; conclusion: Research suggests ... than was originally thought.
e. Argument; conclusion: Developing an AIDS vaccine ... skeptics claim.

ANS: E PTS: 2

15. Geology can be divided into two major time-related disciplines: physical geology and historical geology. Physical geology is the study of the materials the planet is composed of and the present day processes that operate on the surface and within the earth's deeper layers. Historical geology is the study of the earth's 4.6 billion year history, its formation, development, and evolution. Historical geologists strive to create a time-line of events that have occurred since the earth's formation.

Alan D. Sills, *Earth Science the Easy Way*

a. Nonargument.
b. Argument; conclusion: Historical geologists ... since the earth's formation.
c. Argument; conclusion: Physical geology ... the earth's deeper layers.
d. Argument; conclusion: Geology can be divided ... historical geology.
e. Argument; conclusion: Historical geology ... development, and evolution.

ANS: A PTS: 2

16. Nicotine is addictive because its chemical structure is so similar to the neurotransmitter acetylcholine that once inside the brain it unlocks several other chemicals. One of these chemicals is dopamine, which produces a highly pleasant sensation. Another is adrenaline, which increases alertness. Yet a third is serotonin, which improves one's mood. When people are deprived of these chemicals, they naturally want more, and this leads to addiction.

a. Argument; conclusion: When people are deprived ... leads to addiction.
b. Argument; conclusion: Nicotine is addictive.
c. Argument; conclusion: One of these chemicals is dopamine ... pleasant sensation.
d. Nonargument.
e. Argument; conclusion: Its chemical structure ... unlocks several other chemicals.

ANS: D PTS: 2

17. For awhile, during the 1990s, it looked as though the loggerhead sea turtle might be making a comeback. But a new federal report suggests that loggerheads have begun to decline again. Their life-pattern makes them doubly vulnerable to humans. They lay their eggs on beaches, habitat vulnerable to development and disturbance, and they spend their long lives at sea, where they are often fouled in fishing nets.

Newspaper editorial

a. Argument; conclusion: But a new federal report ... begun to decline again.
b. Nonargument.
c. Argument; conclusion: Their life-pattern ... doubly vulnerable to humans.
d. Argument; conclusion: For awhile, during the 1990s ... making a comeback.
e. Argument; conclusion: They lay their eggs ... fouled in fishing nets.

ANS: C PTS: 2

INSTRUCTIONS: The following problems relate to identifying and evaluating inductive and deductive arguments. Select the best answer for each.

18. After examining DNA evidence found at the crime scene, Dr. Jacobs, a highly qualified forensic biologist, says that Alex Foster could not have committed the crime. Therefore, we conclude that Foster is innocent.
a. Inductive, weak.
b. Deductive, sound.
c. Deductive, invalid.
d. Deductive, valid.
e. Inductive, strong.

ANS: E PTS: 2

19. Some preachers are evangelists, so some preachers are TV personalities, since some evangelists are TV personalities.
a. Inductive, weak.
b. Deductive, invalid.
c. Inductive, strong.
d. Deductive, sound.
e. Deductive, valid.

ANS: B PTS: 2

20. The poster on your neighbor's lawn says "Vote Horton for Sheriff." Therefore, it's clear that Horton would make a great sheriff.
a. Inductive, sound.
b. Inductive, strong.
c. Deductive, valid.
d. Inductive, weak.
e. Deductive, invalid.

ANS: D PTS: 2

21. After drinking a bottle of Black Diamond Special Brew, Clyde noticed a slightly bitter aftertaste. Lauren and Nicole noticed the same thing when they drank some Black Diamond a year earlier. We conclude that every bottle of Black Diamond Special Brew has a slightly bitter after taste.
a. Inductive, weak.
b. Deductive, invalid.

c. Inductive, strong.
d. Deductive, valid.
e. Inductive, cogent.

ANS: C PTS: 2

22. Either Michelle Pfeiffer or Martha Stewart is a popular film star. But Michele Pfeiffer is not a film star at all. Therefore, Martha Stewart is a popular film star.
a. Deductive, valid.
b. Inductive, weak.
c. Deductive, cogent.
d. Deductive, invalid.
e. Inductive, strong.

ANS: A PTS: 2

23. Given that *A* and *B* are the diagonals of a parallelogram. It follows that *A* and *B* have the same length.
a. Deductive, valid.
b. Inductive, strong.
c. Deductive, sound.
d. Inductive, weak.
e. Deductive, invalid.

ANS: E PTS: 2

24. Jim Searcy, a religious prophet who now lives in Cypress, claims that the Prince of Wales is the Antichrist. Therefore, we must conclude that the Prince of Wales is up to no good.
a. Inductive, weak.
b. Deductive, invalid.
c. Deductive, sound.
d. Deductive, valid.
e. Inductive, strong.

ANS: A PTS: 2

25. If football is a rough sport, then football injuries abound. It is the case that football injuries abound. Thus, it follows that football is a rough sport.
a. Inductive, strong.
b. Deductive, invalid.
c. Inductive, weak.
d. Deductive, valid.
e. Inductive, uncogent.

ANS: B PTS: 2

26. A divining rod is a magical device for detecting hidden water, metal, and gemstones. Your friend Roger is using his divining rod on the beach right now. Therefore, he'll likely find some diamonds buried beneath the sand.
a. Deductive, valid.
b. Inductive, strong.
c. Deductive, invalid.
d. Inductive, weak.
e. Deductive, unsound.

ANS: D PTS: 2

27. After smoking only a few cigarettes per day, Krista became addicted within two months. The same thing happened to Dave, Jean, and Marty. Therefore, since Dennis has been smoking a few cigarettes per day for the past two months, he's probably addicted, too.
    a. Deductive, invalid.
    b. Deductive, valid.
    c. Inductive, weak.
    d. Inductive, cogent.
    e. Inductive, strong.

    ANS: E PTS: 2

28. Natalie is a kleptomaniac. Therefore, she has a compulsion to steal things.
    a. Deductive, valid.
    b. Inductive, weak.
    c. Inductive, cogent.
    d. Inductive, strong.
    e. Deductive, invalid.

    ANS: A PTS: 2

29. Lydia loves Ryan, and Ryan loves anchovy pizza. Therefore, it follows necessarily that Lydia loves anchovy pizza.
    a. Deductive, sound.
    b. Deductive, valid.
    c. Deductive, invalid.
    d. Inductive, strong.
    e. Inductive, weak.

    ANS: C PTS: 2

30. After investing in the stock market, Pamela doubled her money in just two years, and Beth and Tiffany did the same thing. However, Greg, Ivan, and Marty all lost money on the stock market during the same time frame. The obvious conclusion is that women do better than men in the stock market.
    a. Inductive, strong.
    b. Inductive, weak.
    c. Deductive, invalid.
    d. Deductive, unsound.
    e. Deductive, valid.

    ANS: B PTS: 2

31. Andrew is lighter than Carl, and Carl is heavier than Marty. Therefore, it follows necessarily that Andrew is lighter than Marty.
    a. Inductive, strong.
    b. Deductive, valid.
    c. Inductive, weak.
    d. Deductive, invalid.
    e. Deductive, sound.

    ANS: D PTS: 2

32. The arctic ice cap has been shrinking for several years as a result of global warming, and that trend is expected to continue. Therefore, since arctic polar bears depend on that ice for survival, the arctic polar bear population will shrink in the years ahead.
    a. Inductive, weak.

b. Deductive, invalid.
c. Inductive, strong.
d. Deductive, valid.
e. Inductive, uncogent.

ANS: C PTS: 2

33. If Ken Burns makes historical documentaries, then he enhances our knowledge of the past. Ken Burns does make historical documentaries. Therefore he enhances our knowledge of the past.
a. Deductive, valid.
b. Inductive, weak.
c. Deductive, invalid.
d. Inductive, strong.
e. Deductive, cogent.

ANS: A PTS: 2

34. During the past 80 years, the number of Model T Fords on the highway has steadily fallen while the number of deaths from lung cancer has steadily risen. Thus, to reduce the number of deaths from lung cancer we should bring back the Model T Ford.
a. Deductive, invalid.
b. Inductive, weak.
c. Deductive, valid.
d. Inductive, strong.
e. Inductive, cogent.

ANS: B PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

35. Which of the following are all nonarguments?
a. Illustrations, predictions, warnings.
b. Expository passages, opinions, generalizations.
c. Syllogisms, predictions, expository passages.
d. Opinions, illustrations, causal inferences.
e. Conditional statements, explanations, statements of belief.

ANS: E PTS: 2

36. Which of the following are all inductive arguments?
a. Arguments from authority, arguments from analogy, causal inferences.
b. Causal inferences, hypothetical syllogisms, predictions.
c. Generalizations, arguments from authority, arguments from definition.
d. Hypothetical syllogisms, arguments from definition, disjunctive syllogisms.
e. Categorical syllogisms, arguments from authority, arguments based on signs.

ANS: A PTS: 2

37. Which of the following are all conclusion indicators?
a. As a result, it follows that, given that.
b. Accordingly, because, as indicated by.
c. Given that, for, seeing that.
d. Hence, thus, so.
e. Thus, implies that, because.

ANS: D PTS: 2

38. In the expression, "Carbon monoxide is poisonous because it prevents hemoglobin from supplying oxygen to the body," the statement "Carbon monoxide is poisonous" is called the:
    a. Conclusion.
    b. Explanandum.
    c. Antecedent.
    d. Explanans.
    e. Consequent.

    ANS: B PTS: 2

39. In the expression "If hybrid cars become popular, then the price of gasoline will drop," the statement "Hybrid cars become popular" is called the:
    a. Consequent.
    b. Premise.
    c. Antecedent.
    d. Explanans.
    e. Conditional.

    ANS: C PTS: 2

40. An argument that proceeds from knowledge of an effect to a claim about a cause is:
    a. A sound argument.
    b. A strong argument.
    c. An uncogent argument.
    d. An inductive argument.
    e. A deductive argument.

    ANS: D PTS: 2

41. An argument that applies a scientific law to a specific case is usually:
    a. A cogent argument.
    b. An inductive argument.
    c. A strong argument.
    d. An invalid argument.
    e. A deductive argument.

    ANS: E PTS: 2

42. If a deductive argument has all false premises and a true conclusion, then we know:
    a. The argument is invalid.
    b. The argument is valid.
    c. Nothing as such about the argument's validity.
    d. The argument is sound.
    e. The argument is uncogent.

    ANS: C PTS: 2

43. Which of the following is a necessary condition for graduating from college?
    a. Fulfilling the course requirements.
    b. Attending the graduation ceremony.
    c. Receiving gifts from family members.
    d. Showing up for all your classes.
    e. Wearing a cap and gown.

    ANS: A PTS: 2

44. Which of the following is a sufficient condition for winning an election?
    a. Appealing to the voters.
    b. Getting more than half the votes.
    c. Staying alive until all the votes are counted.
    d. Running an honest campaign.
    e. Having adequate funding.

    ANS: B PTS: 2

PROBLEM

INSTRUCTIONS: The following problems relate to the counterexample method.

1. **PART A**
   No brass lanterns are fixtures that glitter because all crystal chandeliers are fixtures that glitter, and no brass lanterns are crystal chandeliers.

   Which of the following correctly expresses the form of this argument?

   a. No B are F.
      No B are C.
      All F are C.

   b. No B are F.
      All C are F.
      No B are C.

   c. No B are C.
      No B are F.
      All C are F.

   d. All F are C.
      No C are B.
      No B are F.

   e. All C are F.
      No B are C.
      No B are F.

   PART B
   Which of the following substitutions proves the argument invalid?
   a. C = cats, F = fish, B = animals.
   b. C = dogs, F = fish, B = mammals.
   c. C = cats, F = animals, B = dogs.
   d. C = animals, F = mammals, B = fish.
   e. C = dogs, F = mammals, B = animals.

   ANS:
   Part A: e
   Part B: c

   PTS: 4

2. **PART A**
   If music pirating continues, then property rights are ignored. Thus, if property rights are ignored, then recording artists will be cheated, because if music pirating continues, then recording artists will be cheated.

   Which of the following correctly expresses the form of this argument?

   a. If M then P.
      If P then R.
      If M then R.

   b. If P then R.
      If M than P.
      If M then R.

   c. If R then M.
      If P then M.
      If P then R.

   d. If M then P.
      If M then R.

   e. If R then P.
      If M then P.

If P then R. If M then R.

PART B

Which of the following substitutions proves the argument invalid?

a. M = Neil Armstrong has walked on the moon, P = Neil Armstrong is a human, R = Neil Armstrong is an astronaut.
b. M = Paris Hilton has walked on the moon, P = Paris Hilton is a human, R = Paris Hilton is an astronaut.
c. M = Britney Spears makes CDs, P = Britney Spears is a singer, R = Britney Spears is a human.
d. M = Nicole Kidman programs computers, P = Ben Affleck sells fertilizer, R = Jennifer Lopez raises elephants.
e. M = Brad Pitt stars in movies, P = Brad Pitt is an actor, R = Brad Pitt is a human.

ANS:
Part A: d
Part B: b

PTS: 4

3. **PART A**

Some playoff games are heartbreakers, since all playoff games are either heartbreakers or occasions for glee.

Which of the following correctly expresses the form of this argument?

a. All P are either H or O.
Some P are H.

b. Some P are H.
All P are either H or O.

c. All P are either H or O.
Some PG are H.

d. All P are H.
Some P are either H or O.

e. All PG are either H or O.
Some G are H.

PART B

Which of the following substitutions proves the argument invalid?

a. P = fish, H = animals, O = mammals.
b. P = dogs, H = cats, O = fish.
c. P = dogs, H = fish, O = animals.
d. P = male, G = dogs, H = animals, O = fish.
e. P = women, H = humans, O = doctors.

ANS:
Part A: a
Part B: c

PTS: 4

Chapter 1 Test C

MULTIPLE CHOICE

INSTRUCTIONS: The following selections relate to distinguishing arguments from nonarguments and identifying conclusions. Select the best answer for each.

1. Incandescent light bulbs eventually burn out because the high temperature of the filament causes tungsten atoms to fly off and collect on the inside of the bulb's glass. This loss of tungsten is slowed, but not prevented, by introducing argon inside the bulb's envelope. As more and more atoms are lost, the filament disintegrates. When this happens, no electricity flows through the filament, and the bulb produces no light.
   a. Argument; conclusion: Incandescent light bulbs eventually burn out.
   b. Argument; conclusion: The high temperature of the filament ... the bulb's glass.
   c. Argument; conclusion: The filament disintegrates.
   d. Argument; conclusion: When this happens ... the bulb produces no light.
   e. Nonargument.

   ANS: E PTS: 2

2. The consequences of violence for children are very often grave and damaging. Violence may result in greater susceptibility to lifelong social, emotional and cognitive impairments. Related mental health and social problems include anxiety and depressive disorders, hallucinations, impaired work performance, memory disturbances and aggressive behavior. Early exposure to violence is also associated with later lung, heart and liver disease, fetal death during pregnancy, and suicide attempts.

   Paulo Sergio Pinheiro, *Report of the Independent Expert on Violence Against Children*

   a. Argument; conclusion: Violence may result ... cognitive impairments.
   b. Argument; conclusion: Related mental health ... aggressive behavior.
   c. Argument; conclusion: Early exposure to violence ... suicide attempts.
   d. Argument; conclusion: The consequences of violence ... grave and damaging.
   e. Nonargument.

   ANS: D PTS: 2

3. Finding an identity as a Latino is a tricky issue in the United States because the pressure to assimilate is being repressed by the pressure to retain your roots. If you are deemed too assimilated into American culture, you are branded a "gringo" by your peers or even a turncoat to your blood and country. If you shun all American culture, you are branded as a freeloading malcontent who would be better off going back to where he came from. It is a lose-lose situation.

   Mario Feirro, Letter to the editor

   a. Argument; conclusion: Finding an identity ... in the United States.
   b. Nonargument.
   c. Argument; conclusion: If you are deemed too assimilated ... blood and country.
   d. Argument; conclusion: If you shun all American culture ... where he came from.
   e. Argument; conclusion: The pressure to assimilate ... retain your roots.

   ANS: A PTS: 2

4. A crystal is a form of mineral that has grown in an orderly and symmetrical manner. When broken, it naturally divides into a common shape based on its structure. Crystals are the result of the atomic arrangement of atoms as they grow in a shape that can be duplicated many times. Crystals are made up of molecules that fit neatly together in an orderly way. All crystals of the same material have the same shape.

   Edward F. Albin, *Earth Science Made Easy*

   a. Argument; conclusion: Crystals are the result ... duplicated many times.
   b. Argument; conclusion: When broken, it naturally divides ... its structure.
   c. Nonargument.
   d. Argument; conclusion: All crystals of the same material have the same shape.
   e. Argument; conclusion: A crystal is a form of mineral ... symmetrical manner.

   ANS: C PTS: 2

5. Karl Marx believed that the key to human history was class conflict. According to Marxist theory, the bourgeoisie are locked in inevitable conflict with the proletariat. This bitter struggle can end only when members of the working class unite in revolution and throw off their chains of bondage. The result will be a classless society, one free of exploitation, in which everyone will work according to their abilities and receive according to their needs.

   James M. Henslin, *Essentials of Sociology*

   a. Argument; conclusion: According to Marxist theory ... with the proletariat.
   b. Nonargument.
   c. Argument; conclusion: This bitter struggle can end ... their chains of bondage.
   d. Argument; conclusion: The result will be a classless society ... to their needs.
   e. Argument; conclusion: Karl Marx believed ... class conflict.

   ANS: B PTS: 2

6. In general, whoever produces or distributes child pornography is subject to prosecution. But that rule is not absolute. For example, in 2002 the Supreme Court ruled that computer generated child porn is protected under the First Amendment. The Court reasoned that such pornography was permissible because no real children are exploited.
   a. Argument; conclusion: In general, whoever produces ... subject to prosecution.
   b. Nonargument.
   c. Argument; conclusion: That rule is not absolute.
   d. Argument; conclusion: The Court reasoned ... no real children are exploited.
   e. Argument; conclusion: In 2002 the Supreme Court ... First Amendment.

   ANS: C PTS: 2

7. The three main parts of a neuron are the dendrites, cell body, and axon. The dendrites receive information from other neurons and pass it along to the cell body. The cell body decides whether the information should be passed on to other neurons. If it decides it should, then it does so by means of an electrical impulse that travels down the axon. When the impulse reaches the axon terminals, it triggers chemical communication with other neurons.

   Richard Griggs, *Psychology: A Concise Introduction*

   a. Argument; conclusion: The cell body decides ... to other neurons.
   b. Argument; conclusion: The three main parts ... and axon.
   c. Argument; conclusion: The dendrites ... along to the cell body.
   d. Nonargument.
   e. Argument; conclusion: When the impulse reaches ... with other neurons.

   ANS: D PTS: 2

8. Computerized scanning equipment has revolutionized the study of brain diseases and injuries. At best, conventional X-rays produce only shadowy images of the brain. Computed tomographic (CT) scanning is a specialized type of X-ray that does a much better job of making the brain visible. In a CT scan, X-ray information is collected by a computer and formed into an image of the brain. A CT scan can reveal the effects of strokes, injuries, tumors, and other brain disorders.

Dennis Coon and John O. Mitterer, *Psychology: A Journey*

a. Nonargument.
b. Argument; conclusion: A CT scan can reveal ... other brain disorders.
c. Argument; conclusion: At best, conventional X-rays ... images of the brain.
d. Argument; conclusion: Computed tomographic (CT) scanning ... brain visible.
e. Argument; conclusion: Computerized scanning equipment ... and injuries.

ANS: E PTS: 2

9. If you go to foreign films, if you go to documentaries, if you go to independent films, if you go to good films, you will become a better person because you will understand human nature better. Movies record human nature in a better way than any other art form. That's for sure.

Roger Ebert

a. Argument; conclusion: That's for sure.
b. Nonargument.
c. Argument; conclusion: If you go to foreign films ... a better person.
d. Argument; conclusion: You will understand human nature better.
e. Argument; conclusion: Movies record human nature ... any other art form.

ANS: C PTS: 2

10. If people buy cars that are more efficient, replace large appliances with energy efficient ones, unplug unused freezers and refrigerators, replace incandescent light bulbs with compact fluorescent models, and plant trees on private property and public land, then millions of tons of heat-trapping gasses will be kept out of the atmosphere, the current level of these gasses will be reduced, and the catastrophic consequences of global warming will be averted.
a. Argument; conclusion: People buy cars ... private property and public land.
b. Nonargument.
c. Argument; conclusion: Millions of tons ... out of the atmosphere.
d. Argument; conclusion: The catastrophic consequences ... will be averted.
e. Argument; conclusion: Millions of tons of heat-trapping gasses ... will be averted.

ANS: B PTS: 2

11. The parallel concepts of the element and the atom constitute the very foundations of chemical science. An element is a substance that cannot be broken down into a simpler form capable of an independent existence as observable matter. As such, the concept of the element is a macroscopic one that relates to the world that we can observe with our senses. The atom is the microscopic realization of this concept. That is, it is the actual physical particle that is unique to each chemical element.

Stephen Lower, *Chem 1 Virtual Textbook*

a. Nonargument.
b. Argument; conclusion: The parallel concepts ... foundations of chemical science.
c. Argument; conclusion: As such, the concept of the element ... realization of this concept.
d. Argument; conclusion: It is the actual physical particle ... each chemical element.
e. Argument; conclusion: An element is a substance ... as observable matter.

ANS: A PTS: 2

12. Earth science can be divided into four branches. Geology is the study of rocks, minerals, and forces that wear down the surface and build mountains. Meteorology covers weather, climate, and the atmosphere. Astronomy investigates planets, stars, and other features outside the atmosphere. The study of the oceans is called oceanography.

Scott Ryan, *Earth Science*

a. Argument; conclusion: The study of the oceans is called oceanography.
b. Argument; conclusion: Geology is the study of rocks ... build mountains.
c. Argument; conclusion: Meteorology covers weather, climate, and the atmosphere.
d. Nonargument.
e. Argument; conclusion: Earth science can be divided into four branches.

ANS: D PTS: 2

13. Apple seeds and cherry pits are poisonous because they contain cyanide compounds. Your body can detoxify small quantities of these compounds, but larger doses can lead to difficulty in breathing, increased blood pressure and heart rate, and kidney failure. Reactions can include coma, convulsions, and death from respiratory arrest.

Anne Marie Helmstine, "Your Guide to Chemistry"

a. Argument; conclusion: Apple seeds and cherry pits are poisonous.
b. Argument; conclusion: Reactions can include ... respiratory arrest.
c. Argument; conclusion: They contain cyanide compounds.
d. Argument; conclusion: Your body can detoxify ... kidney failure.
e. Nonargument.

ANS: A PTS: 2

14. The power that modifies, influences, and controls climate originates with the sun. The amount of sunlight striking a particular area of the globe determines the level of warmth and ultimately the movement of air and the amount of precipitation. Because the earth is a globe that rotates about a tilted axis, the amount of sunlight striking the earth varies by region and time.

Gary S. Moore, *Living with the Earth*, 3rd ed.

a. Argument; conclusion: The power that modifies ... originates with the sun.
b. Argument; conclusion: The earth is a globe that rotates about a tilted axis.
c. Argument; conclusion: The amount of sunlight ... varies by region and time.
d. Nonargument.
e. Argument; conclusion: The amount of sunlight ... the amount of precipitation.

ANS: C PTS: 2

15. Native peoples, completely dependent on Mother Earth for everything in their lives, worshipped the Earth as a nurturing goddess that provided for all their needs. From the soil came plants and growing things that provided clothing and food. From the rivers and seas came fish and shellfish for food, trade articles, and tools. From the air came rain, snow, and wind to grow crops and alter the seasons. The Earth was never stagnant or dull, but always provided for those in her care.

Linda Williams, *Earth Science Demystified*

a. Argument; conclusion: From the rivers and seas ... and tools.
b. Argument; conclusion: From the soil came plants ... clothing and food.
c. Argument; conclusion: The Earth was never stagnant ... in her care.
d. Argument; conclusion: Native peoples ... all their needs.
e. Nonargument.

ANS: E PTS: 2

16. Water is abundant over most of the earth's surface, and within the temperature range usually encountered there, it is liquid. Water also is a powerful solvent. Consequently, water is an excellent medium for the chemical processes of living systems. It is hard to imagine life having any other basis than water.

Robert E. Ricklefs, *The Economy of Nature*, 5th ed.

a. Argument; conclusion: It is hard to imagine life having any other basis than water.
b. Nonargument.
c. Argument; conclusion: Water is abundant ... it is liquid.
d. Argument; conclusion: Water is an excellent medium ... living systems.
e. Argument; conclusion: Water also is a powerful solvent.

ANS: D PTS: 2

17. It is a fact that major life forms now on earth were not at all represented in the past. There were no birds or mammals 250 million years ago. It is a fact that major life forms of the past are no longer living. There used to be dinosaurs and Pithecanthropus, and there are none now. It is a fact that all living forms came from previously living forms. Therefore, all present forms of life arose from ancestral forms that were different: birds arose from nonbirds and humans from nonhumans.

R.C. Lewontin, "Evolution/Creation Debate: A Time for Truth"

a. Argument; conclusion: It is a fact that all living forms ... previously living forms.
b. Argument; conclusion: It is a fact that major life forms of the past are no longer living.
c. Nonargument.
d. Argument; conclusion: It is a fact that major life forms ... represented in the past.
e. Argument; conclusion: All present forms of life ... forms that were different.

ANS: E PTS: 2

INSTRUCTIONS: The following problems relate to identifying and evaluating inductive and deductive arguments. Select the best answer for each.

18. After Sally stopped wearing Levi jeans, she started having vision problems. Therefore, to clear up her vision problems, Sally should go back to wearing her Levi's.
a. Inductive, weak.
b. Deductive, unsound.
c. Inductive, strong.
d. Deductive, invalid.
e. Deductive, valid.

ANS: A PTS: 2

19. As global warming continues, the temperature of the world's oceans will rise. As ocean temperatures rise, hurricanes will become more intense. Therefore, hurricanes in the Caribbean will intensify in the years ahead.
a. Inductive, weak.
b. Inductive, strong.
c. Deductive, valid.
d. Deductive, sound.
e. Deductive, invalid.

ANS: B PTS: 2

20. Given that figure *A* is an equilateral triangle, and one of its sides has a length of 1 foot. It follows that its area is less than 1 square foot.
a. Inductive, strong.
b. Inductive, uncogent.

c. Inductive, weak.
d. Deductive, valid.
e. Deductive, invalid.

ANS: D PTS: 2

21. James Watson, co-discoverer of the structure of the DNA molecule, says that Charles Darwin is the most important person to have ever lived. Therefore, it must be the case that Charles Darwin is indeed the most important person to have ever lived.
a. Inductive, strong.
b. Deductive, invalid.
c. Inductive, weak.
d. Inductive, cogent.
e. Deductive, valid.

ANS: C PTS: 2

22. If the northern pike is a ferocious predator, then it is a threat to lake trout. The northern pike is indeed a threat to lake trout. Therefore, the northern pike is a ferocious predator.
a. Inductive, weak.
b. Inductive, strong.
c. Deductive, valid.
d. Inductive, cogent.
e. Deductive, invalid.

ANS: E PTS: 2

23. Either Leonardo da Vinci or Andrew Wyeth painted the Mona Lisa. But it clearly wasn't da Vinci. Therefore, Andrew Wyeth painted the Mona Lisa.
a. Inductive, weak.
b. Deductive, valid.
c. Deductive, invalid.
d. Deductive, sound.
e. Inductive, strong.

ANS: B PTS: 2

24. A week ago we invited Charlie to a party, and within two hours he became drunk and obnoxious. The same thing happened when Theresa invited him three weeks ago. Therefore, it would not be a good idea for Daisy to invite him to next week's party, because the same thing will probably happen again.
a. Inductive, strong.
b. Deductive, invalid.
c. Inductive, weak.
d. Deductive, valid.
e. Inductive, cogent.

ANS: A PTS: 2

25. Henry and Carl, who are neighbors, are about the same age, and they both have heart conditions. Henry takes Digitoxin for his heart, and it relieves his symptoms. Therefore, it would be a good idea for Carl to take the same medicine for his heart.
a. Deductive, valid.
b. Deductive, invalid.
c. Inductive, cogent.
d. Inductive, weak.

e. Inductive, strong.

ANS: D PTS: 2

26. Some statements about the human condition are commercial failures, since some novels are commercial failures, and some novels are statements about the human condition.
a. Inductive, weak.
b. Inductive, strong.
c. Deductive, invalid.
d. Deductive, valid.
e. Inductive, unsound.

ANS: C PTS: 2

27. The pop-up message on your computer screen says "Earn $10,000 per week. Call 306-981-4872." Therefore, if you call that number you can earn $10,000 per week.
a. Deductive, invalid.
b. Deductive, valid.
c. Inductive, strong.
d. Inductive, cogent.
e. Inductive, weak.

ANS: E PTS: 2

28. Louis graduated from college after Cheri, and Cheri graduated before Denise. Therefore, it follows necessarily that Louis graduated before Denise.
a. Deductive, valid.
b. Deductive, invalid.
c. Inductive, strong.
d. Inductive, sound.
e. Inductive, weak.

ANS: B PTS: 2

29. No taggers are publicly spirited citizens, because all taggers are criminals, and no criminals are publicly spirited citizens.
a. Inductive, cogent.
b. Deductive, invalid.
c. Deductive, valid.
d. Inductive, weak.
e. Inductive, strong.

ANS: C PTS: 2

30. After Scott started the engine in his old Chevy, the car backfired several times, and clouds of smoke came from the exhaust pipe. Apparently something must be wrong with the engine.
a. Deductive, valid.
b. Inductive, weak.
c. Deductive, invalid.
d. Inductive, strong.
e. Inductive, cogent.

ANS: D PTS: 2

31. Laura is the sister of either Rachel or Sandy, and Sandy is the sister of Beth. Therefore, it follows necessarily that Laura is the sister of Beth.

a. Deductive, invalid.
b. Deductive, sound.
c. Inductive, strong.
d. Deductive, valid.
e. Inductive, weak.

ANS: A PTS: 2

32. Beneath the image of Thomas Jefferson on this U.S. five-cent coin we see "1975." It must be the case that the coin was minted in 1975.
a. Deductive, invalid.
b. Inductive, strong.
c. Deductive, valid.
d. Inductive, weak.
e. Deductive, sound.

ANS: B PTS: 2

33. When asked how to address the militaristic ambitions of Syria, two Republican senators said we should drop bombs on Damascus, and a third said we should invade. The obvious conclusion is that Republicans are all a bunch of war mongers.
a. Inductive, strong.
b. Deductive, invalid.
c. Inductive, cogent.
d. Deductive, valid.
e. Inductive, weak.

ANS: E PTS: 2

34. If interest rates rise, then home sales will decline. Thus, if interest rates rise, then real estate prices will drop, because if home sales decline, then real estate prices will drop.
a. Deductive, invalid.
b. Inductive, cogent.
c. Deductive, valid.
d. Inductive, weak.
e. Inductive, strong.

ANS: C PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

35. Which of the following are all nonarguments?
a. Predictions, pieces of advice, reports.
b. Opinions, categorical syllogisms, explanations.
c. Expository passages, illustrations, disjunctive syllogisms.
d. Statements of belief, warnings, conditional statements.
e. Generalizations, causal inferences, propositions.

ANS: D PTS: 2

36. Which of the following are all inductive arguments?
a. Generalizations, arguments from authority, arguments based on signs.
b. Disjunctive syllogisms, arguments based on mathematics, arguments from definition.
c. Causal inferences, arguments from definition, predictions.
d. Arguments from analogy, arguments from authority, hypothetical syllogisms.

e. Categorical syllogisms, arguments from authority, predictions.

ANS: A PTS: 2

37. Which of the following are all conclusion indicators?
    a. Implies that, accordingly, since.
    b. For the reason that, it follows that, inasmuch as.
    c. Therefore, for this reason, entails that.
    d. Hence, thus, given that.
    e. Given that, as indicated by, seeing that.

    ANS: C PTS: 2

38. In the expression "Hard water causes spots on glass because it contains calcium and magnesium salts that remain when the water dries," the statement "It contains calcium and magnesium salts that remain when the water dries" is called the:
    a. Explanandum.
    b. Consequent.
    c. Premise.
    d. Conclusion.
    e. Explanans.

    ANS: E PTS: 2

39. In the expression "If politicians engage in cover-ups, then they risk being prosecuted as criminals," the statement "They risk being prosecuted as criminals" is called the:
    a. Conclusion.
    b. Conditional.
    c. Antecedent.
    d. Explanandum.
    e. Consequent.

    ANS: E PTS: 2

40. Any argument in which the conclusion actually follows with strict necessity from the premises is:
    a. Inductive and valid.
    b. Deductive and sound.
    c. Deductive and invalid.
    d. Deductive and valid.
    e. Inductive and cogent.

    ANS: D PTS: 2

41. If an inductive argument has all false premises and a probably false conclusion, then we know:
    a. The argument is strong.
    b. Nothing, as such, about the argument's strength.
    c. The argument is cogent.
    d. The argument is valid.
    e. The argument is sound.

    ANS: B PTS: 2

42. Which of the following is a sufficient condition for being a parent?
    a. Having sex.
    b. Getting pregnant.
    c. Giving birth.

d. Getting married.
e. Having a baby shower.

ANS: C PTS: 2

43. Which of the following is a necessary condition for making a cell phone call?
a. Speaking clearly.
b. Turning the phone on.
c. Calling a friend.
d. Selecting a ring tone.
e. Inputting often used numbers.

ANS: B PTS: 2

44. Which of the following sentences is a statement?
a. Lady Gaga is a brain surgeon.
b. Let's go to a restaurant tonight.
c. I suggest that you take a vacation.
d. Do you know Senator Garson?
e. Stop beating that drum this very minute.

ANS: A PTS: 2

PROBLEM

INSTRUCTIONS: The following problems relate to the counterexample method.

1. **PART A**
All evangelicals are political conservatives, so some fundamentalists are evangelicals, since some fundamentalists are political conservatives.

Which of the following correctly expresses the form of this argument?

a. All P are E.
Some P are F.
Some F are E.

b. Some F are P.
Some F are E.
All E are P.

c. All E are H.
Some F are E.
Some F are P.

d. All E are P.
Some F are P.
Some F are E.

e. Some F are P.
Some F are E.
All P are E.

PART B
Which of the following substitutions proves the argument invalid?
a. E = fish, P = mammals, F = animals.
b. E = dogs, P = animals, F = mammals.
c. E = dogs, P = animals, F = cats.
d. E = birds, P = dogs, F = fish.
e. E = animals, P = cats, F = fish.

ANS:
Part A: d
Part B: c

PTS: 4

2. **PART A**

If shopping malls utilize video cameras, then the privacy of shoppers is invaded. Consequently, shopping malls utilize video cameras, because the privacy of shoppers is invaded.

Which of the following correctly expresses the form of this argument?

a. If S then P.
P
S

b. P
S
If S then P.

c. If S then P.
S
P

d. If P then S.
P
S.

e. If P then S.
S
P

PART B

Which of the following substitutions proves the argument in invalid?

a. M = Angelina Jolie stars in movies, P = Angelina Jolie is an actress.
b. M = George Washington was beheaded, P = George Washington is dead.
c. M = Abraham Lincoln was assassinated, P = Abraham Lincoln is dead.
d. M = Tom Smith was killed in a plane crash, P = Tom Smith is dead.
e. M = George Washington is dead, P = George Washington was beheaded.

ANS:
Part A: a
Part B: b

PTS: 4

3. **PART A**

Some movies are long comedies, for some movies are long, and some movies are comedies.

Which of the following correctly expresses the form of this argument?

a. Some M are L.
Some M are C.
Some M are LC.

b. Some M are LC.
Some M are L.
Some M are C.

c. Some M are C.
Some M are LC.
Some M are L.

d. Some LC are M.
Some M are L.
Some M are C.

e. Some M are L.
Some M are C.
Some LC are C.

PART B

Which of the following substitutions proves the argument invalid?

a. M = birds, L = yellow, C = canaries.
b. M = vegetables, L = green, C = peppers.
c. M = animals, L = green, C = elephants.
d. M = parrots, L = green, C = animals.
e. M = elephants, L = red, C = cats.

ANS:
Part A: a
Part B: c

PTS: 4

Chapter 1 Test D

MULTIPLE CHOICE

INSTRUCTIONS: The following selections relate to distinguishing arguments from nonarguments and identifying conclusions. Select the best answer for each.

1. For a long time, Haydn's music was regarded as genial and lively, and much of its depth, wit, and brilliance went unnoticed. This was because only a few of his compositions were performed regularly at concerts. Nowadays, however, much more of Haydn's music is being performed, and the extraordinary range of his achievement is being recognized.

   Jeffrey Yudkin, *Understanding Music*, 4th edition

   a. Argument; conclusion: For a long time ... went unnoticed.
   b. Argument; conclusion: Only a few of his compositions ... at concerts.
   c. Argument; conclusion: Nowadays ... being performed.
   d. Nonargument.
   e. Argument; conclusion: The extraordinary range ... is being recognized.

   ANS: D PTS: 2

2. While the topical application of fluoride to children's teeth can help reduce decay, the addition of fluoride to drinking water is definitely not a good idea. Fluoride in drinking water has caused widespread dental fluorosis (mottled and discolored enamel), it is a cumulative poison, which means that it builds up in bone and tissue, and it has been linked to lower IQ in children and to Alzheimer's disease in adults.
   a. Argument; conclusion: The addition of fluoride ... not a good idea.
   b. Argument; conclusion: Fluoride is a cumulative poison.
   c. Nonargument.
   d. Argument; conclusion: The topical application of fluoride ... reduce decay.
   e. Argument; conclusion: It has been linked ... Alzheimer's disease in adults.

   ANS: A PTS: 2

3. The aim of an experiment is not to prove that a hypothesis is correct. Rather, the aim is to demonstrate that it is highly probable that the hypothesis is correct. Researchers ask the question in the following way: "What is the probability that the results I have obtained could have been found by chance alone?" Hence, social psychology, like most other sciences, deals with probabilities rather than absolutes.

   Stephen Worchel, *et al*., *Understanding Social Psychology*, 5th edition

   a. Argument; conclusion: Researchers ask the question ... chance alone"
   b. Argument; conclusion: Social psychology ... probabilities rather than absolutes.
   c. Argument; conclusion: Rather, the aim ... probable that the hypothesis is correct.
   d. Argument; conclusion: The aim of an experiment ... the hypothesis is correct.
   e. Nonargument.

   ANS: B PTS: 2

4. If carbon dioxide levels have been rising for years, the polar ice caps are melting, the frequency and intensity of hurricanes is increasing, and the acidity of sea water is rising, then global warming is for real, it's not just a delusion of leftist thinking, and the nations of the world must unite to address the threat.
   a. Argument; conclusion: It's not just a delusion of leftist thinking.
   b. Argument; conclusion: The nations of the world must unite to address the threat.
   c. Argument; conclusion: The polar ice caps are melting.

d. Argument; conclusion: Global warming is for real.
e. Nonargument.

ANS: E PTS: 2

5. After having a part time job for more than a year, I have gotten used to the fact that the government takes money from me every two weeks to put toward Social Security. It isn't fair that I should pay for some old person's rent in Florida. Despite my dislike of the right wing, I find the idea of privatizing appealing. I would much rather keep that money to invest in mutual funds, stocks or my college education.

Andy Irwin, Letter to the Editor

a. Argument; conclusion: After having a part time job ... toward Social Security.
b. Argument; conclusion: Despite my dislike ... of privatizing appealing.
c. Nonargument.
d. Argument; conclusion: I would much rather keep ... or my college education.
e. Argument; conclusion: It isn't fair ... rent in Florida.

ANS: C PTS: 2

6. Marketing to consumers via the Internet has many advantages for marketers. It allows products and services to be offered 24 hours a day, 7 days a week. It allows products to be offered globally in an efficient manner. And it is cost efficient, saving the need for stores, paper catalogues, and sales people.

J. Paul Peter and Jerry C. Olson, *Consumer Behavior and Marketing Strategy*

a. Argument; conclusion: It allows products and services ... 7 days a week.
b. Argument; conclusion: It allows products to be offered ... an efficient manner.
c. Argument; conclusion: It is cost efficient ... and sales people.
d. Nonargument.
e. Argument; conclusion: Marketing to consumers ... for marketers.

ANS: E PTS: 2

7. Hot peppers cause a burning sensation in the mouth because they contain a compound called capsaicin (or any of the related compounds called capsaicinoids). Capsaicin is an alkaline oil that binds to pain receptors in the mucous membrane. In some cases it produces excruciating agony. Drinking something acidic, like lemonade, helps to combat the burning.

Anne Marie Helmenstine, *About.com Guide to Chemistry*

a. Nonargument.
b. Argument; conclusion: Capsaicin is an alkaline oil ... mucous membrane.
c. Argument; conclusion: Hot peppers cause a burning sensation in the mouth.
d. Argument; conclusion: Drinking something acidic ... combat the burning.
e. Argument; conclusion: They contain a compound ... capsaicinoids).

ANS: A PTS: 2

8. The ozone layer filters out harmful ultraviolet rays from sunlight before they can reach the surface of our planet and cause damage to humans and other life forms. Any substantial reduction in the amount of this ozone would threaten life as we know it. Consequently, the appearance of a large "hole" in the ozone layer over Antarctica represents a major environmental crisis.

Colin Baird and Michael Cann, *Environmental Chemistry*, 3rd edition

a. Argument; conclusion: Any substantial reduction ... life as we know it.
b. Argument; conclusion: The appearance of a large ... environmental crisis.
c. Argument; conclusion: The ozone layer ... surface of our planet.
d. Argument; conclusion: The ozone layer ... and other life forms.
e. Nonargument.

ANS: B PTS: 2

9. Evolution is central to vertebrate biology because it provides a principle that organizes the diversity we see among living vertebrates. Also it helps to fit extinct forms into the context of living species. Classification, initially a process of attaching names to organisms, has become a method of understanding evolution.

F. Harvey Pough, *et al*., *Vertebrate Life*, 7th edition

a. Argument; conclusion: It provides a principle ... among living vertebrates.
b. Argument; conclusion: Classification ... a method for understanding evolution.
c. Nonargument.
d. Argument; conclusion: Evolution is central to vertebrate biology.
e. Argument; conclusion: It helps to fit ... the context of living species.

ANS: D PTS: 2

10. The field of economics is divided into two major branches: microeconomics and macroeconomics. Microeconomics studies the behavior of individual economic agents and how they interact with each other in markets. Macroeconomics focuses on the overall level of economic activity in a society. It studies such topics as unemployment, inflation, and the rate of economic growth.

Don E. Waldman, *Microeconomics*

a. Argument; conclusion: Microeconomics studies ... with each other in markets.
b. Argument; conclusion: The field of economics ... macroeconomics.
c. Argument; conclusion: It studies such topics ... rate of economic growth.
d. Nonargument.
e. Argument; conclusion: Macroeconomics focuses ... in a society.

ANS: D PTS: 2

11. The exchange of energy between an organism and its surroundings involves the transformation of one form of energy into another. For example, when a leaf produces sugar, it converts solar energy to chemical energy in sugar molecules. When an animal's muscle cells use sugar as fuel to power movements, they convert chemical energy into kinetic energy. All of the work of cells involves the transformation of chemical energy (which is ordered) into heat, which is the unordered energy of random molecular motion.

Neil A. Campbell and Jane B. Reece, *Biology*, 6th edition

a. Argument; conclusion: When an animal's muscle cells ... into kinetic energy.
b. Argument; conclusion: The exchange of energy ... form of energy into another.
c. Argument; conclusion: When a leaf produces sugar ... in sugar molecules.
d. Argument; conclusion: All of the work of cells ... random molecular motion.
e. Nonargument.

ANS: B PTS: 2

12. The rate at which a light bulb uses energy (converts electrical energy to light and heat) is usually printed on it—for example, "100 watts." A watt is a unit of power, which describes the rate of energy use. A power of 1 watt means that 1 joule of energy is being used each second. Hence, for every second that you leave a 100-watt light bulb turned on, you will have to pay the utility company for 100 joules of energy.

Jeffrey Bennett, *et al*., *The Cosmic Perspective*, 3rd edition

a. Argument; conclusion: The rate at which a light bulb ... printed on it.
b. Nonargument.
c. Argument; conclusion: For every second ... 100 joules of energy.
d. Argument; conclusion: A power of 1 watt ... used each second.
e. Argument; conclusion: A watt is a unit of power ... rate of energy use.

ANS: C PTS: 2

13. A misdemeanor is a minor criminal offense punishable by less than one year in prison. Thus, petty theft is a misdemeanor, as is vandalism, trespassing, and prostitution. Some people convicted of misdemeanors are fined. Others are sentenced to probation or community service.
    a. Nonargument.
    b. Argument; conclusion: Some people convicted of misdemeanors are fined.
    c. Argument; conclusion: Petty theft is a misdemeanor ... and prostitution.
    d. Argument; conclusion: Others are sentenced to probation or community service.
    e. Argument; conclusion: A misdemeanor ... one year in prison.

    ANS: A PTS: 2

14. Capitalism tends to stratify society. Those who are successful are respected and rewarded. Those who are not are abandoned as failures. The net result is that society becomes hierarchical. This is an elitist circumstance thought desirable by people on the right.

    Leon P. Baradat, *Political Ideologies*

    a. Argument; conclusion: Those who are successful are respected and rewarded.
    b. Argument; conclusion: The net result is that society becomes hierarchical.
    c. Argument; conclusion: This is an elitist circumstance ... on the right.
    d. Nonargument.
    e. Argument; conclusion: Capitalism tends to stratify society.

    ANS: E PTS: 2

15. Health can be conceptualized from medical, functional, or psychological perspectives. The medical model defines health as an absence of illness or disease, while the functional model defines health in terms of individuals' ability to perform their assigned roles. The psychological model of health emphasizes physical, psychological, and social well-being in measuring the health of individuals.

    Michael P. Soroka and George J. Bryjak, *Social Problems: A World at Risk*

    a. Nonargument.
    b. Argument; conclusion: Health can be conceptualized ... perspectives.
    c. Argument; conclusion: The functional model ... their assigned roles.
    d. Argument; conclusion: The medical model ... or disease.
    e. Argument; conclusion: The psychological model ... health of individuals.

    ANS: A PTS: 2

16. The world economy is controlled by multinational corporations. The majority of them are based in the United States. Their power in the underdeveloped nations perpetuates the dependency of many Third World nations on the United States. Multinationals add to the tensions in Third World countries through arms sales and intervention in the domestic affairs of host countries.

    D. Stanley Eitzen and Maxine Baca Zinn, *Social Problems*, 9th edition

    a. Argument; conclusion: The world economy ... multinational corporations.
    b. Argument; conclusion: Their power ... on the United States.
    c. Argument; conclusion: Multinationals add ... affairs of host countries.
    d. Nonargument.
    e. Argument; conclusion: The majority of them are based in the United States.

    ANS: D PTS: 2

17. Microorganisms are an essential part of the web of life in every environment. Microorganisms in the oceans and in bodies of fresh water capture energy from sunlight and store it in molecules that other organisms use as food. They decompose dead organisms and waste materials from living organisms. And they even make nitrogen available to plants.

a. Argument; conclusion: Microorganisms in the oceans ... use as food.
b. Argument; conclusion: And they even make nitrogen available to plants.
c. Argument; conclusion: Microorganisms are an essential part ... environment.
d. Argument; conclusion: They decompose dead organisms ... living organisms.
e. Nonargument.

ANS: C PTS: 2

INSTRUCTIONS: The following problems relate to identifying and evaluating inductive and deductive arguments. Select the best answer for each.

18. Scott Peterson was convicted by a jury of murdering his wife and unborn son. Therefore, he must have actually committed these crimes.
    a. Inductive, sound.
    b. Inductive, strong.
    c. Deductive, invalid.
    d. Inductive, weak.
    e. Deductive, valid.

    ANS: B PTS: 2

19. If stun guns are safe, then police officers will use them. Stun guns are not safe. Therefore, police officers will not use them.
    a. Inductive, strong.
    b. Inductive, weak.
    c. Deductive, valid.
    d. Inductive, invalid.
    e. Deductive, invalid.

    ANS: E PTS: 2

20. Figure *A* is a right triangle, and two of its sides have a length of 1 foot. Therefore, its third side is greater than 1 foot in length.
    a. Deductive, valid.
    b. Deductive, invalid.
    c. Inductive, strong.
    d. Deductive, sound.
    e. Inductive, weak.

    ANS: A PTS: 2

21. Harry just bought a brand new car. Harry must have won the lottery.
    a. Deductive, invalid.
    b. Inductive, invalid.
    c. Deductive, valid.
    d. Inductive, strong.
    e. Inductive, weak.

    ANS: E PTS: 2

22. The inscription beneath the image on a one-dollar bill reads "Washington." Therefore, the image must be that of George Washington.
    a. Deductive, invalid.
    b. Deductive, valid.

c. Deductive, sound.
d. Inductive, strong.
e. Inductive, weak.

ANS: D PTS: 2

23. No nations that ignore poverty are morally developed nations. No nations that ignore poverty are models for the Third World. Therefore, all morally developed nations are models for the Third World.
a. Inductive, weak.
b. Inductive, strong.
c. Deductive, invalid.
d. Deductive, sound.
e. Deductive, valid.

ANS: C PTS: 2

24. Of the more than 40 red wines imported from Australia, Green Valley, Old Châteaux, and Fireside Vineyards are excellent. Thus, it must be the case that all red wines imported from Australia are excellent.
a. Deductive, valid.
b. Inductive, weak.
c. Inductive, strong.
d. Inductive, invalid.
e. Deductive, invalid.

ANS: B PTS: 2

25. The annual snowfall in Buffalo, New York, has been over 40 inches every year for the past 20 years. Therefore, probably the snowfall in Buffalo will be over 40 inches next year.
a. Inductive, strong.
b. Deductive, sound.
c. Deductive, invalid.
d. Deductive, valid.
e. Inductive, weak.

ANS: A PTS: 2

26. The 2004 Olympic games were held in either Athens or Salt Lake City. But they were not held in Athens. Therefore, they were held in Salt Lake City.
a. Inductive, valid.
b. Deductive, invalid.
c. Deductive, valid.
d. Inductive, strong.
e. Deductive, cogent.

ANS: C PTS: 2

27. Yuri Androvich is a blue-eyed Russian artist, and his paintings sell for over $10,000. Peter Roganov is also a blue-eyed Russian, and he just finished art school. Thus, his paintings should sell for over $10,000, too.
a. Inductive, strong.
b. Deductive, valid.
c. Inductive, cogent.
d. Deductive, invalid.
e. Inductive, weak.

ANS: E PTS: 2

28. Given that $2x - 1 = 13$. It follows that $x = 6$.
    a. Inductive, strong.
    b. Deductive, invalid.
    c. Deductive, valid.
    d. Inductive, weak.
    e. Deductive, sound.

    ANS: B PTS: 2

29. *Time* magazine carried an article on the huge hurricane that struck the Caiman Islands. *Newsweek* is similar in its coverage to *Time*. Thus, *Newsweek* must have carried an article on that hurricane.
    a. Deductive, sound.
    b. Inductive, strong.
    c. Deductive, invalid.
    d. Deductive, valid.
    e. Inductive, weak.

    ANS: B PTS: 2

30. All essay contests are challenges that promote thinking. All challenges that promote thinking are educational experiences. Thus, all essay contests are educational experiences.
    a. Inductive, strong.
    b. Deductive, invalid.
    c. Inductive, weak.
    d. Deductive, valid.
    e. Inductive, cogent.

    ANS: D PTS: 2

31. If malaria becomes drug resistant, then countless victims will perish. If malaria becomes drug resistant, then a major health crisis will erupt. Therefore, if a major health crisis erupts, then countless victims will perish.
    a. Deductive, invalid.
    b. Deductive, sound.
    c. Inductive, strong.
    d. Inductive, weak.
    e. Deductive, valid.

    ANS: A PTS: 2

32. The bumper sticker on that car says "Don't Waste Your Vote. Vote Libertarian." Therefore, it's clear that you should vote for Libertarian candidates in the next election.
    a. Deductive, valid.
    b. Deductive, invalid.
    c. Inductive, weak.
    d. Inductive, cogent.
    e. Inductive, strong.

    ANS: C PTS: 2

33. Maria is a hypochondriac. Therefore, she always worries about her health.
    a. Inductive, strong.
    b. Deductive, valid.

c. Inductive, weak.
d. Deductive, unsound.
e. Deductive, invalid.

ANS: B PTS: 2

34. Author Tim LaHaye says that the rapture (when all righteous people will be miraculously lifted up to heaven) will occur in the not too distant future. Therefore, this event is sure to happen soon.
a. Inductive, strong.
b. Deductive, uncogent.
c. Deductive, invalid.
d. Inductive, weak.
e. Deductive, valid.

ANS: D PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

35. Which of the following are all premise indicators?
a. Hence, thus, implies that.
b. Accordingly, seeing that, inasmuch as.
c. For, given that, because.
d. As, consequently, because.
e. For the reason that, in that, wherefore.

ANS: C PTS: 2

36. Which of the following are all arguments?
a. Reports, arguments from signs, arguments from authority.
b. Causal inferences, explanations, warnings.
c. Illustrations, conditional statements, pieces of advice.
d. Syllogisms, predictions, generalizations.
e. Arguments from analogy, explanations, illustrations.

ANS: D PTS: 2

37. Which of the following are all deductive arguments?
a. Arguments from analogy, arguments based on signs, causal inferences.
b. Arguments from analogy, predictions, causal inferences.
c. Predictions, hypothetical syllogisms, arguments from authority.
d. Arguments based in mathematics, hypothetical syllogisms, generalizations.
e. Categorical syllogisms, arguments from definition, disjunctive syllogisms.

ANS: E PTS: 2

38. An argument that concludes something is true because somebody has said so is:
a. A deductive argument.
b. An inductive argument.
c. A strong argument.
d. A valid argument.
e. A sound argument.

ANS: B PTS: 2

39. An argument whose conclusion rests on the definition of a word used in the premises is:
a. A deductive argument.

b. A valid argument.
c. A sound argument.
d. A cogent argument.
e. An inductive argument.

ANS: A PTS: 2

40. In the expression "Barack Obama was elected president because he capitalized on a bad economy," the statement "He capitalized on a bad economy" is called the:
a. Premise.
b. Consequent.
c. Explanans.
d. Conclusion.
e. Explanandum.

ANS: C PTS: 2

41. In the expression "If North Korea has nuclear weapons, then it poses a threat to world peace," the statement "It poses a threat to world peace" is called the:
a. Conditional.
b. Consequent.
c. Antecedent.
d. Explanandum.
e. Conclusion.

ANS: B PTS: 2

42. Which of the following is a necessary condition for going for a swim?
a. Treading water.
b. Doing the breaststroke.
c. Holding your breath.
d. Getting into the water.
e. Doing the backstroke.

ANS: D PTS: 2

43. Which of the following is a sufficient condition for making ice from fresh water?
a. Putting the water outside in the cold.
b. Putting the water into the freezer.
c. Pouring the water into an ice cube tray.
d. Lowering the temperature of the water below 40° F.
e. Lowering the temperature of the water to 20° F.

ANS: E PTS: 2

44. If a deductive argument has false premises and a false conclusion, then we know:
a. Nothing as such about the argument's validity.
b. The argument is invalid.
c. The argument is valid.
d. The argument is weak.
e. The argument is uncogent.

ANS: A PTS: 2

PROBLEM

INSTRUCTIONS: The following problems relate to the counterexample method.

1. **PART A**
All spies are covert operators, so all covert operators are risk takers, for all spies are risk takers.

Which of the following correctly expresses the form of this argument?

a. All C are R.
<u>All S are R.</u>
All S are C

b. If S then R.
<u>If S then C.</u>
If C then R.

c. All S are C.
<u>All S are R.</u>
All C are R.

d. All S are C.
<u>All C are R.</u>
All S are R.

e. All C are S.
<u>All R are S.</u>
All C are R.

PART B
Which of the following substitutions proves the argument invalid?
a. C = cats, S = dogs, R = animals.
b. S = fish, R = mammals, C = animals.
c. S = dogs, C = mammals, R = animals.
d. R= dogs, C = cats, S = animals.
e. S = cats, C = animals, R = mammals.

ANS:
Part A: c
Part B: e

PTS: 4

2. **PART A**
If deficits increase then the economy will stagnate. Thus, if deficits increase, then interests rates will rise, because if interest rates rise, then the economy will stagnate.

Which of the following correctly expresses the form of this argument?

a. If D then E.
<u>If D then I.</u>
If I then E.

b. If D then I.
<u>If I then E.</u>
If D then E.

c. If D then I.
<u>If D then E.</u>
If I then E.

d. If D then E.
<u>If E then I.</u>
If D then I.

e. If D then E.
<u>If I then E.</u>
If D then I.

PART B
Which of the following substitutions proves the argument invalid?
a. D = Tom Hanks is a man, E = Tom Hanks is a human, I = Tom Hanks is a woman.
b. D = dogs, I = mammals, E = animals.
c. D = Bob is a physician, E = Bob is a professional, I = Bob is a doctor.
d. D = dogs, E = animals, I = cats.
e. D = Halle Berry is an actor, E = Halle Berry is a woman, I = Halle Berry is a human.

ANS:
Part A: e
Part B: a

PTS: 4

3. **PART A**
All corporate mergers are either success stories or fiascos. Hence, some corporate mergers are fiascos.

Which of the following correctly expresses the form of this argument?

a. All C are S.
Some C are F.

b. All CM are either S or F.
Some C are F.

c. Some C are F.
All C are either S or F.

d. All C are either S or F.
Some C are F.

e. If C then either S or F.
If C then F.

PART B
Which of the following substitutions proves the argument invalid?
a. C = mammals, F = dogs, S = cats.
b. C = dogs, S = mammals, F = fish.
c. C = animals, S = fish, F = mammals.
d. C = Bill Gates is a man, S= Bill Gates is a human, F = Bill Gates is a woman.
e. C = cats, S = mammals, F = animals.

ANS:
Part A: d
Part B: b

PTS: 4

Chapter 1 Test E

MULTIPLE CHOICE

INSTRUCTIONS: The following selections relate to distinguishing arguments from nonarguments and identifying conclusions. Select the best answer for each.

1. The Social Security system is a pay-as-you-go arrangement where contributions by today's workers are paid out to yesterday's retirees. If part of today's contributions go into private retirement accounts, they cannot be paid out. To make up the shortage, the government would have to borrow massive amounts of money. Hence, Social Security privatization would cause a huge increase in the federal deficit.
   a. Nonargument.
   b. Argument; conclusion: If part of today's contributions ... cannot be paid out.
   c. Argument; conclusion: Social security privatization ... federal deficit.
   d. Argument; conclusion: The Social Security System ... to yesterday's retirees.
   e. Argument; conclusion: To make up the shortage ... massive amounts of money.

   ANS: C PTS: 2

2. There are two approaches to the development and testing of hypotheses: inductive and deductive. In the inductive method, the scientist gathers empirical data and from it arrives at a generalization. The inductive method proceeds from specific observations to a general conclusion. Using a deductive method, a scientist develops a general idea about a phenomenon, performs experiments, and from them makes specific predictions that can be tested again.

   Robert Leo Smith and Thomas M Smith, *Ecology and Field Biology*, 6th edition
   a. Argument; conclusion: The inductive method ... to a general conclusion.
   b. Nonargument.
   c. Argument; conclusion: There are two approaches ... inductive and deductive.
   d. Argument; conclusion: using a deductive method ... can be tested again.
   e. Argument; conclusion: In the inductive method ... at a generalization.

   ANS: B PTS: 2

3. Cats can see in the dark because they have a special mirror—like layer of cells behind their retina called the *tapetum lucidum*. When light passes through the retina, it is reflected back through it by this layer of cells, and this provides additional stimulation to the retina's light receptors.
   a. Argument; conclusion: This provides additional ... light receptors.
   b. Argument; conclusion: When light passes through ... by this layer of cells.
   c. Argument; conclusion: They have a special ... *tapetum lucidum*.
   d. Argument; conclusion: Cats can see in the dark.
   e. Nonargument.

   ANS: E PTS: 2

4. The U.S. is the largest single market in the world in terms of national income. It represents roughly 25 percent of the total world market for all products and services. Thus, U.S. companies that wish to achieve maximum growth potential must "go global" because 75 percent of the world market potential is outside their home country.

   Warren J. Keegan and Mark C. Green, *Global Marketing*
   a. Argument; conclusion: U.S. companies that wish ... must "go global."
   b. Argument; conclusion: It represents ... products and services.
   c. Argument; conclusion: 75 percent of the world market ... home country.
   d. Nonargument.

e. Argument; conclusion: The U.S. is the largest ... national income.

ANS: A PTS: 2

5. Over the past decade, many graffiti artists have moved away from painting their signatures in the familiar wide-style lettering (a practice known as "tagging"). Instead, they make their mark with pictograms. Thus, a Belgian artist known as Plug appends large, cartoon electric plugs to machines in public places, while Cha, an academy-trained painter, adorns the walls of Barcelona with Picasso-influenced cats.

Tristan Manco, "Street Logos"

a. Argument; conclusion: Cha, an academy—trained ... Picasso-influenced cats.
b. Argument; conclusion: Instead, they make their mark with pictograms.
c. Argument; conclusion: Over the past decade ... (a practice known as "tagging").
d. Nonargument.
e. Argument; conclusion: A Belgian artist known as Plug ... in public places.

ANS: D PTS: 2

6. Sugar never spoils or gets moldy because it has an extremely low moisture content. This low moisture content dehydrates and kills microorganisms that might cause mold, and it impedes chemical changes that could cause spoilage.
a. Argument; conclusion: This low moisture content ... that might cause mold.
b. Argument; conclusion: Sugar never spoils or gets moldy.
c. Argument; conclusion: It impedes chemical changes that could cause spoilage.
d. Argument; conclusion: It has an extremely low moisture content.
e. Nonargument.

ANS: E PTS: 2

7. Contrary to the assurances of the fast food industry, most fast foods are loaded with fat grams. For example, KFC's Chunky Chicken Pot Pie has 42 fat grams, a Double Whopper with Cheese has 65, and an order of Mucho Grande Nachos has an incredible 82 fat grams.
a. Argument; conclusion: An order of Mucho Grande Nachos ... 82 fat grams.
b. Nonargument.
c. Argument; conclusion: Most fast foods are loaded with fat grams.
d. Argument; conclusion: KFC's Chunky Chicken Pot Pie has 42 fat grams.
e. Argument; conclusion: A Double Whopper with Cheese has 65.

ANS: C PTS: 2

8. Education in the United States is a system in crisis. Compared to their Asian and European counterparts, American students are poor academic performers, especially in sciences and in mathematics. Despite having received an education, millions of adults are functionally and culturally illiterate. Educational funding has been cut dramatically, and many school facilities are in dangerous states of disrepair.

Michael P. Soroka and George J. Bryjak, *Social Problems: A World at Risk*

a. Argument; conclusion: Education in the United States is a system in crisis.
b. Argument; conclusion: Despite having received ... culturally illiterate.
c. Argument; conclusion: Compared to their Asian ... sciences and in mathematics.
d. Argument; conclusion: Educational funding ... dangerous states of disrepair.
e. Nonargument.

ANS: A PTS: 2

9. Photographs taken from space show that Earth is striking in its beauty. Blue oceans cover nearly three-fourths of the surface, broken by the continental land masses and scattered islands. The polar caps are white with snow and ice, and white clouds are scattered above the surface. At night, the glow of artificial lights clearly reveals the presence of an intelligent civilization.

Jeffrey Bennett, *et al*., *The Cosmic Perspective*, 3rd edition

a. Argument; conclusion: The polar caps ... above the surface.
b. Nonargument.
c. Argument; conclusion: Blue oceans ... scattered islands.
d. Argument; conclusion: At night, the glow ... an intelligent civilization.
e. Argument; conclusion: Photographs taken from space ... striking in its beauty.

ANS: B PTS: 2

10. Water is a highly reactive substance, quite different both physically and chemically from most other liquids. Indeed, life as we know it would be impossible if water did not have the properties it does. The first living systems presumably arose in the aqueous environment of shallow seas. It is therefore not surprising that the living organisms of the present are intimately adapted at the molecular level to the special properties of water.

David Randall *et al*., *Animal Physiology*

a. Argument; conclusion: Water is a highly reactive ... most other liquids.
b. Argument; conclusion: Indeed, life as we know it ... the properties it does.
c. Argument; conclusion: It is not surprising ... properties of water.
d. Nonargument.
e. Argument; conclusion: The first living systems ... shallow seas.

ANS: C PTS: 2

11. Health care is a basic right. Our current system is convoluted and unethical and should go the way of gladiator games. We can spar and battle in the free market in many arenas, but when we get sick we should all have care—not just the lawyers, bankers, politicians, and others who can afford it. We like the free market, but we shouldn't let people die in the street—not in this country.

Lucius Schoenbaum, Letter to the Editor

a. Argument; conclusion: We can spar and battle ... others who can afford it.
b. Argument; conclusion: We like the free market ... not in this country.
c. Argument; conclusion: Our current system is convoluted ... gladiator games.
d. Nonargument.
e. Argument; conclusion: Health care is a basic right.

ANS: D PTS: 2

12. If the dietary guidelines promulgated by the Department of Agriculture, which recommend two servings of fruit, three servings of vegetables, and two servings of milk products every day, are to have any real effect, then fundamental cultural changes will have to occur, and people will have to rethink their inherited notions about the purpose of eating—whether we should eat for pleasure or for health—and what is necessary for a meal to be satisfying.

a. Nonargument.
b. Argument; conclusion: The dietary guidelines ... are to have any real effect.
c. Argument; conclusion: Dietary guidelines have been promulgated by the Department of Agriculture.
d. Argument; conclusion: Fundamental cultural changes ... to be satisfying.
e. Argument; conclusion: We must rethink whether we should eat for pleasure or for health.

ANS: A PTS: 2

13. Modern biology is as important as it is inspiring. Genetics and cell biology are revolutionizing medicine and agriculture. Molecular biology is providing new tools for anthropology, helping us trace the origin and dispersal of early humans. Ecology is helping us evaluate environmental issues, such as the causes and consequences of global warming. And neuroscience and evolutionary biology are reshaping psychology and sociology.

Neil A. Campbell and Jane B. Reece, *Biology*, 6th edition

a. Argument; conclusion: Genetics and cell biology ... agriculture.
b. Argument; conclusion: Molecular biology ... dispersal of early humans.
c. Nonargument.
d. Argument; conclusion: Neuroscience and evolutionary biology ... sociology.
e. Argument; conclusion: Modern biology is as important as it is inspiring.

ANS: E PTS: 2

14. The farther away we look in distance, the further back we look in time. This fact allows us to see what parts of the universe looked like in the distant past. For example, if we look at a galaxy that is 1 billion light years away, its light has taken 1 billion years to reach us—which means we are seeing it as it looked 1 billion years ago.

Jeffrey Bennett, *et al*., *The Cosmic Perspective*, 3rd edition

a. Argument; conclusion: This fact allows us to see ... in the distant past.
b. Argument; conclusion: The farther away ... we look in time.
c. Argument; conclusion: If we look at a galaxy ... 1 billion years to reach us.
d. Nonargument.
e. Argument; conclusion: We are seeing it as it looked 1 billion years ago.

ANS: D PTS: 2

15. The beating of your heart results from physiological mechanisms fundamentally no different from those that underlie heart function in fishes, frogs, and birds. Likewise, the molecular events that produce an electrical nerve impulse in your brain are fundamentally the same as those that produce an impulse in the nerve of a squid or rat. For these reasons, animal physiology has made innumerable contributions to our understanding of human physiology.

David Randall *et al*., *Animal Physiology*

a. Argument; conclusion: Likewise, the molecular events ... nerve of a squid or rat.
b. Nonargument.
c. Argument; conclusion: The beating of your heart ... frogs, and birds.
d. Argument; conclusion: The beating of your heart ... physiological mechanisms.
e. Argument; conclusion: Animal physiology ... human physiology.

ANS: E PTS: 2

16. Laws banning junk e-mail are largely ineffective. Spammers can easily avoid such laws by moving overseas, where local rules allow them free rein. Also, it is often impossible to detect the source of junk e-mail. Much of it is sent from zombie transmitters—personal computers that have been hijacked by viruses.

Newspaper Clipping

a. Argument; conclusion: Spammers can easily avoid ... allow them free rein.
b. Argument; conclusion: Much of it is sent ... hijacked by viruses.
c. Argument; conclusion: Laws banning junk e-mail are largely ineffective.
d. Argument; conclusion: Also, it is often impossible ... junk e-mail.
e. Nonargument.

ANS: C PTS: 2

17. The 300 million people who live in the U.S. make up just 5% of the world's population, but they consume a quarter of the world's oil supply. For much of the twentieth century, the U.S. was the world's largest oil producer, and its profligacy wasn't a pressing problem. Today, however, we are only the third-largest producer, behind Saudi Arabia and Russia. In terms of proven reserves, we have slipped to tenth place in the international rankings.

John Cassidy, "Pump Dreams"

a. Argument; conclusion: For much of the twentieth century ... a pressing problem.
b. Nonargument.
c. Argument; conclusion: In terms of proven reserves ... international rankings.
d. Argument; conclusion: The 290 million people who live ... world's oil supply.
e. Argument; conclusion: Today, however ... Saudi Arabia and Russia.

ANS: B PTS: 2

INSTRUCTIONS: The following problems relate to identifying and evaluating inductive and deductive arguments. Select the best answer for each.

18. If corporations continue to pollute, then the environment will be damaged beyond repair. The environment will be damaged beyond repair. Therefore, corporations will continue to pollute.
a. Deductive, invalid.
b. Deductive, sound.
c. Inductive, strong.
d. Deductive, valid.
e. Inductive, weak.

ANS: A PTS: 2

19. Valerie Nelson's last three novels sold well over a million copies each. She's now finished a new novel, and it has gotten better reviews than the earlier ones. Hence, her new novel should sell over a million copies, too.
a. Inductive, strong.
b. Inductive, weak.
c. Deductive, invalid.
d. Inductive, cogent.
e. Deductive, valid.

ANS: A PTS: 2

20. *Newsweek*, a magazine having a circulation of about 3 million, featured an article on the Iraq election. *Playboy* is also a magazine with a circulation of about 3 million. Thus, it probably featured an article on the Iraq election.
a. Deductive, invalid.
b. Inductive, strong.
c. Deductive, valid.
d. Inductive, sound.
e. Inductive, weak.

ANS: E PTS: 2

21. George is an egotist. Therefore, he has an inflated impression of his own importance.
a. Inductive, weak.
b. Deductive, invalid.
c. Inductive, strong.
d. Deductive, valid.
e. Inductive, cogent.

ANS: D PTS: 2

22. That billboard in the middle of the field says "Get the U.S. out of the U.N." From this it's clear that the United Nations is a bad organization.
    a. Deductive, valid.
    b. Inductive, weak.
    c. Deductive, weak.
    d. Deductive, invalid.
    e. Inductive, strong.

    ANS: B PTS: 2

23. Some heart attacks are not fatal occurrences, and no strokes are heart attacks. Thus, some strokes are not fatal occurrences.
    a. Deductive, sound.
    b. Inductive, strong.
    c. Deductive, invalid.
    d. Inductive, weak.
    e. Deductive, valid.

    ANS: C PTS: 2

24. Figure *A* is a right triangle, and two of its sides have a length of 1 foot. Therefore, it's area is $^1/_2$ square foot.
    a. Inductive, strong.
    b. Deductive, invalid.
    c. Deductive, sound.
    d. Deductive, valid.
    e. Inductive, weak.

    ANS: D PTS: 2

25. More than 99% of all airplane flights land safely. Therefore, probably the next flight to depart from JFK International Airport will land safely.
    a. Deductive, valid.
    b. Inductive, strong.
    c. Inductive, weak.
    d. Deductive, invalid.
    e. Inductive, uncogent.

    ANS: B PTS: 2

26. Radio show host Frank Weltner, who is a neo-Nazi white supremacist, says that all immigration from Mexico must stop immediately. Therefore, we must take Mr. Weltner at his word and call a halt to Mexican immigration.
    a. Deductive, unsound.
    b. Inductive, strong.
    c. Deductive, invalid.
    d. Deductive, valid.
    e. Inductive, weak.

    ANS: E PTS: 2

27. If prisoners are discharged without any skills, then they will return to a life of crime. If prisoners are unable to get jobs, then they will return to a life of crime. Thus, if prisoners are discharged without any skills, then they will be unable to get jobs.
    a. Deductive, invalid.
    b. Deductive, valid.
    c. Inductive, weak.
    d. Inductive, cogent.
    e. Inductive, strong.

    ANS: A PTS: 2

28. According to a widely respected poll, 60% of the voters in Pennsylvania support Amelia Kerrigan for Governor. Therefore, Kerrigan will probably win, since the election is only two days away.
    a. Deductive, valid.
    b. Inductive, weak.
    c. Inductive, cogent.
    d. Inductive, strong.
    e. Deductive, invalid.

    ANS: D PTS: 2

29. All terrorist leaders are secluded megalomaniacs. No secluded megalomaniacs are lovers of humanity. Therefore, no terrorist leaders are lovers of humanity.
    a. Deductive, sound.
    b. Deductive, valid.
    c. Deductive, invalid.
    d. Inductive, strong.
    e. Inductive, weak.

    ANS: B PTS: 2

30. Ashley detests Isabel, and Isabel detests Francesca. Therefore, it necessarily follows that Ashley detests Francesca.
    a. Inductive, weak.
    b. Inductive, strong.
    c. Deductive, invalid.
    d. Inductive, uncogent.
    e. Deductive, valid.

    ANS: C PTS: 2

31. Frank is bringing flowers home to his wife. Apparently Frank is having an affair.
    a. Inductive, strong.
    b. Deductive, valid.
    c. Inductive, weak.
    d. Deductive, invalid.
    e. Deductive, unsound.

    ANS: C PTS: 2

32. On the inside surface of this gold ring some small print reads "14k." Therefore, the ring must be made of 14 caret gold.
    a. Deductive, valid.
    b. Deductive, invalid.
    c. Inductive, weak.

d. Inductive, strong.
e. Inductive, cogent.

ANS: D PTS: 2

33. Either Woodrow Wilson or Theodore Roosevelt promoted the formation of the League of Nations. But it wasn't Wilson. Therefore, Theodore Roosevelt promoted the formation of the League of Nations.
a. Deductive, uncogent.
b. Inductive, weak.
c. Deductive, invalid.
d. Inductive, strong.
e. Deductive, valid.

ANS: E PTS: 2

34. Mitzi the cat is looking at its empty bowl and meowing. Mitzi must be hungry.
a. Inductive, strong.
b. Deductive, invalid.
c. Deductive, valid.
d. Inductive, weak.
e. Inductive, cogent.

ANS: A PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

35. Which of the following are all nonarguments?
a. Expository passages, illustrations, predictions.
b. Generalizations, expository passages, opinions.
c. Predictions, syllogisms, warnings.
d. Conditional statements, illustrations, causal inferences.
e. Illustrations, explanations, pieces of advice.

ANS: E PTS: 2

36. Which of the following are all inductive arguments?
a. Arguments based on signs, hypothetical syllogisms, predictions.
b. Generalizations, causal inferences, arguments from analogy.
c. Arguments based on signs, arguments from authority, arguments from definition.
d. Arguments from definition, disjunctive syllogisms, categorical syllogisms.
e. Categorical syllogisms, arguments from authority, causal inferences.

ANS: B PTS: 2

37. Which of the following are all conclusion indicators?
a. For this reason, may be inferred from, seeing that.
b. Hence, since, as indicated by.
c. Accordingly, thus, it must be that.
d. We may conclude, it follows that, given that.
e. Wherefore, because, implies that.

ANS: C PTS: 2

38. In the expression, "Barack Obama was awarded the Nobel Peace Prize because he was perceived as being committed to the resolution of international conflicts through diplomacy and not warfare," the statement "Barack Obama was awarded the Nobel Peace Prize" is called the:

a. Explanandum.
b. Conclusion.
c. Antecedent.
d. Explanans.
e. Consequent.

ANS: A PTS: 2

39. In the expression "If corporate CEOs are paid exorbitant salaries, then investors are cheated," the statement "Corporate CEOs are paid exorbitant salaries" is called the:
a. Conditional.
b. Premise.
c. Consequent.
d. Explanans.
e. Antecedent.

ANS: E PTS: 2

40. An argument that proceeds from knowledge of a cause to a claim about an effect is:
a. A sound argument.
b. A strong argument.
c. A cogent argument.
d. An inductive argument.
e. A deductive argument.

ANS: D PTS: 2

41. An argument that proceeds from our knowledge of the past to a claim about the future is:
a. A valid argument.
b. An inductive argument.
c. A strong argument.
d. A deductive argument.
e. A cogent argument.

ANS: B PTS: 2

42. If a deductive argument has one false premise and a true conclusion, then we know:
a. The argument is invalid.
b. The argument is valid.
c. Nothing as such about the argument's validity.
d. The argument is sound.
e. The argument is uncogent.

ANS: C PTS: 2

43. Which of the following is a sufficient condition for being a dog?
a. Having a tail.
b. Weighing at least 30 pounds.
c. Being an animal.
d. Being a collie.
e. Having fur.

ANS: D PTS: 2

44. Which of the following is a necessary condition for going ice skating?
a. Wearing skates.

b. Driving to the ice rink.
c. Having the skates sharpened.
d. Falling down on the ice.
e. Tracing a figure 8 in the ice.

ANS: A PTS: 2

PROBLEM

INSTRUCTIONS: The following problems relate to the counterexample method.

1. **PART A**
No symbols of equality are threats to civil order, for no gay marriages are threats to civil order, and all gay marriages are symbols of equality.

Which of the following correctly expresses the form of this argument?

a. No S are T.
No G are T.
All G are S.

b. No G are T.
All G are S.
No S are T.

c. All G are S.
No S are T.
No G are T.

d. If G then T.
If G then S.
If S then T.

e. All S are G.
No G are T.
No S are T.

PART B
Which of the following substitutions proves the argument invalid?
a. S = mammals, T = fish, G = dogs.
b. S = cats, T = fish, G = mammals.
c. G = cats, S= mammals, T = fish.
d. T = humble spirits, S = adventurous characters, G = creative individuals.
e. G = dogs, T = cats, S = animals.

ANS:
Part A: b
Part B: e

PTS: 4

2. **PART A**
If charter schools are expanded, then education will improve, so charter schools will be expanded, because education will improve.

Which of the following correctly expresses the form of this argument?

a. C
E
If C then E.

b. If C then E.
C
E

c. If C then E.
E
C

d. All C are E.
E
C

e. If C then E.
If E then F.
If C then F.

PART B
Which of the following substitutions proves the argument invalid?

a. C = Clint Eastwood is a man, E = Clint Eastwood is a human.
b. C = George Washington was assassinated, E = George Washington is dead.
c. C = Cathy Smith was assassinated, E = Cathy Smith is dead.
d. C = mammals, E = animals.
e. C = George Washington is dead, E = Abraham Lincoln is dead.

ANS:
Part A: c
Part B: b

PTS: 4

3. **PART A**
Some attorneys are litigators, so some attorneys are skillful litigators, since some attorneys are skillful.

Which of the following correctly expresses the form of this argument?

a. Some A are S.
<u>Some A are L.</u>
Some A are SL.

b. Some A are SL.
<u>Some A are L.</u>
Some A are S.

c. Some A are S.
<u>Some A are SL.</u>
Some A are L.

d. Some A are not S.
<u>Some A are not L.</u>
Some A are not SL.

e. Some A are L.
<u>Some A are not S.</u>
Some A are SL.

PART B
Which of the following substitutions proves the argument invalid?
a. A = doctors, S = highly trained, L = specialists.
b. A = women, S = caring, L = parents.
c. A = fruits, S = yellow, L = lemons.
d. A = people, S = intelligent, L = morons.
e. A = cars, S = large, L = sedans.

ANS:
Part A: a
Part B: d

PTS: 4

Chapter 1 Test F

MULTIPLE CHOICE

INSTRUCTIONS: The following selections relate to distinguishing arguments from nonarguments and identifying conclusions. Select the best answer for each.

1. When our nation begins to use torture as a means to an end, we chip away at the values we profess to defend. Little by little and step by step, we coarsen our society. We cheapen ourselves until we become no different than those who commit acts of terror. At that point, what shall we make of ourselves?

   Joseph Neri, Letter to the Editor

   a. Argument; conclusion: Little by little and step by step, we coarsen our society.
   b. Argument; conclusion: At that point, what shall we make of ourselves?
   c. Argument; conclusion: When our nation ... we profess to defend.
   d. Argument; conclusion: We cheapen ourselves ... acts of terror.
   e. Nonargument.

   ANS: E PTS: 2

2. Assume that the universe is 14 billion years old. If we look at a galaxy that is 12 billion light years away, we see it as it was 12 billion years ago, when the universe was only 2 billion years old. Thus, simply by looking to great distances, we can see what parts of the universe looked like when the universe was younger. The key limitation to this ability is the power of our telescopes.

   Jeffrey Bennett, *et al.*, *The Cosmic Perspective*, 3rd edition

   a. Nonargument.
   b. Argument; conclusion: The key limitation ... power of our telescopes.
   c. Argument; conclusion: Simply by looking ... universe was younger.
   d. Argument; conclusion: Assume that the universe is 14 billion years old.
   e. Argument; conclusion: If we look at a galaxy ... 2 billion years old.

   ANS: C PTS: 2

3. If Supreme Court Justice Ruth Bader Ginsburg is correct in her assessment that "people who are well represented at trial do not get the death penalty," then the disparate skills of defense attorneys in capital cases throughout America guarantees that defendants who are legally innocent will continue to be executed and that manifest justice dictates that the death penalty be abolished.
   a. Argument; conclusion: Manifest justice dictates ... be abolished.
   b. Nonargument.
   c. Argument; conclusion: Supreme Court Justice ... do not get the death penalty."
   d. Argument; conclusion: The disparate skills ... be abolished.
   e. Argument; conclusion: The disparate skills ... continue to be executed.

   ANS: B PTS: 2

4. Liquids and gasses have the property of being fluid—that is, they flow—because their atoms, ions, or molecules are not so strongly attracted to each other as they are in solids. Not being confined to specific locations, the particles in a liquid can move past one another.

   Melvin D. Joesten and James L Wood, *World of Chemistry*, 2nd edition

   a. Argument; conclusion: Not being confined ... move past one another.
   b. Argument; conclusion: Their atoms, ions, or molecules ... as they are in solids.
   c. Argument; conclusion: Liquids and gasses ... they flow.
   d. Nonargument.

e. Argument; conclusion: Liquids and gasses have the property of being fluid.

ANS: D PTS: 2

5. Tattooing and body piercing pose serious health risks to those receiving them. The primary concern is infection with blood-born pathogens like H.I.V. and hepatitis. Bacteria that live on the skin are easily spread by unsterilized instruments or ungloved hands. And tongue and genital piercing can also provide channels for bacteria and viruses to enter the bloodstream after the piercing procedure.

Lorraine Kreahling, "The Perils of Needles to the Body"

a. Argument; conclusion: Tattooing and body piercing ... to those receiving them.
b. Argument; conclusion: And tongue and genital piercing ... piercing procedure.
c. Argument; conclusion: The primary concern ... like H.I.V. and hepatitis.
d. Argument; conclusion: Bacteria that live on the skin ... ungloved hands.
e. Nonargument.

ANS: A PTS: 2

6. There are numerous ways to study nonhuman animals. One method is to observe a group and describe (either by taking notes or speaking into a tape recorder) as completely as possible everything that occurs. Another technique is to "follow" one "focal" animal, describing everything it does. Still another frequently used method involves making observations of a focal animal at precise intervals.

Robert Jurmain, *et al*., *Essentials of Physical Anthropology*, 5th edition

a. Argument; conclusion: One method is to observe ... everything that occurs.
b. Argument; conclusion: Another technique ... describing everything it does.
c. Nonargument.
d. Argument; conclusion: Still another frequently used method ... precise intervals.
e. Argument; conclusion: There are numerous ways to study nonhuman animals.

ANS: C PTS: 2

7. Your sofa may be poisoning you. Its foam padding probably contains flame retardant chemicals called polybrominated diphenyl ethers. These chemicals have been linked to memory loss and brain damage. Also they may cause cancer and damage the liver.
a. Argument; conclusion: Also they may cause cancer and damage the liver.
b. Nonargument.
c. Argument; conclusion: These chemicals ... brain damage.
d. Argument; conclusion: Its foam padding ... polybrominated diphenyl ethers.
e. Argument; conclusion: Your sofa may be poisoning you.

ANS: E PTS: 2

8. We can't bomb our way out of nuclear proliferation. But in a world in which nuclear weapons are the badge of real nations, no self-respecting superpower is going to disarm unilaterally, and every nonnuclear state will want a seat at the table. The only way to escape this deadly cycle is for the nuclear powers to step up and lead negotiations for an international agreement abolishing nuclear weapons.

Chris Cooper, Letter to the Editor

a. Argument; conclusion: We can't bomb our way out of nuclear proliferation.
b. Argument; conclusion: The only way to escape ... abolishing nuclear weapons.
c. Argument; conclusion: But in a world ... disarm unilaterally.
d. Nonargument.
e. Argument; conclusion: Every nonnuclear state will want a seat at the table.

ANS: B PTS: 2

9. There are two types of pension plan. In a defined contribution plan, a company contributes a specific amount of money, often based on profits, to a fund owned by its employees. In a defined benefit plan, the company promises to make specific lifetime payments to its employees when they retire. The payments depend on each employee's pay at retirement, years of service, and expected lifespan.

Eugene F. Brigham, *Financial Management: Theory and Practice*

a. Nonargument.
b. Argument; conclusion: In a defined benefit plan ... when they retire.
c. Argument; conclusion: In a defined contribution plan ... owned by its employees.
d. Argument; conclusion: The payments depend ... expected lifespan.
e. Argument; conclusion: There are two types of pension plan.

ANS: A PTS: 2

10. Earthquakes occur because the surface of the earth is composed of giant rigid plates, and these plates are constantly moving. When one plate rubs against another, the motion of the plates in that area is halted, and strain builds up. Eventually the edge of the plate cannot withstand the increasing strain, and it breaks. The resulting shudder is felt as an earthquake.

a. Argument; conclusion: The resulting shudder is felt as an earthquake.
b. Argument; conclusion: Earthquakes occur.
c. Argument; conclusion: When one plate rubs ... strain builds up.
d. Nonargument.
e. Argument; conclusion: Eventually the edge of the plate ... it breaks.

ANS: D PTS: 2

11. Because the properties of life emerge from complex organization, scientists seeking to understand biological processes confront a dilemma. One horn of the dilemma is that we cannot fully explain a higher level of order without breaking it down into its parts, but this inevitably kills it. The other horn is the futility of trying to analyze something as complex as an organism or a cell without taking it apart.

Neil A. Campbell and Jane B. Reece, *Biology*, 6th edition

a. Argument; conclusion: The other horn is ... without taking it apart.
b. Argument; conclusion: The properties of life emerge from complex organization.
c. Nonargument.
d. Argument; conclusion: One horn of the dilemma ... inevitably kills it.
e. Argument; conclusion: Scientists seeking to understand ... confront a dilemma.

ANS: E PTS: 2

12. All businesses are involved in three types of activity—financing, investing, and operating. For example, the founder of Tootsie Roll needed financing to start and grow his business. This may have come from either personal savings or outside sources. The cash obtained was then invested in the equipment necessary to run the business, such as mixing equipment and delivery vehicles. Once this equipment was in place, the founder could begin the operating activities of making and selling candy.

Paul D. Kimmel, *et al*., *Financial Accounting*, 3rd edition

a. Argument; conclusion: The cash obtained ... delivery vehicles.
b. Argument; conclusion: Once this equipment was in place ... selling candy.
c. Argument; conclusion: The founder of Tootsie Roll ... grow his business.
d. Argument; conclusion: All businesses are involved ... and operating.
e. Nonargument.

ANS: D PTS: 2

13. Finance as we know it today grew out of and lies between economics and accounting. Economists developed the notion that an asset's value is based on the future cash flow the asset will provide. Accountants provided the information about the likely size of those cash flows. So, people who work in finance require knowledge of both economics and accounting.

Eugene F. Brightman *et al*., *Fundamentals of Financial Management.*

a. Argument; conclusion: Economists developed the notion ... asset will provide.
b. Argument; conclusion: People who work in finance ... accounting.
c. Argument; conclusion: Accountants provided the information ... cash flows.
d. Nonargument.
e. Argument; conclusion: Finance as we know it today ... accounting.

ANS: B PTS: 2

14. Marx saw all societies as composed of two basic parts: the foundation and the superstructure. The foundation of any society, according to this theory, is material. It consists of the economic system. The superstructure is composed of all nonmaterial institutions in the society, and each is arranged in a way that suits the ruling class. Included in the superstructure are values, ideology, government, education, law, religion, and art.

Leon P. Baradat, *Political Ideologies*

a. Argument; conclusion: Included in the superstructure ... religion, and art.
b. Argument; conclusion: The superstructure is composed ... suits the ruling class.
c. Nonargument.
d. Argument; conclusion: Marx saw all societies ... and the superstructure.
e. Argument; conclusion: The foundation of any society ... is material.

ANS: C PTS: 2

15. People everywhere recognize a category of people who are related to them biologically or through adoption—their relatives, we call them. But the principles by which certain kinds of relatives are placed in cultural categories vary between kinship systems. Thus, English speakers think of the sisters of both our mother and our father as a single kind of relative, and we call them by the same kinship term, *aunt*. But there are some cultural traditions in which the sister of one's mother is considered one kind of relative and the sister of one's father a different kind, and each is called by a separate kinship term.

Garrick Bailey and James Peoples, *Essentials of Cultural Anthropology*

a. Nonargument.
b. Argument; conclusion: But the principles ... vary between kinship systems.
c. Argument; conclusion: English speakers think ... the same kinship term, *aunt*.
d. Argument; conclusion: But there are some cultural ... separate kinship term.
e. Argument; conclusion: People everywhere recognize ... we call them.

ANS: A PTS: 2

16. In some ways biology is the most demanding of all sciences. This is partly because living systems are so complex and partly because biology is a multidisciplinary science that requires a knowledge of chemistry, physics, and mathematics. And of all the sciences, biology is the most connected to the humanities and social sciences.

Neil A. Campbell and Jane B. Reece, *Biology*, 6th edition

a. Argument; conclusion: Living systems are so complex.
b. Argument; conclusion: Biology is a multidisciplinary science ... mathematics.
c. Nonargument.
d. Argument; conclusion: In some ways biology ... of all sciences.
e. Argument; conclusion: Of all the sciences ... humanities and social sciences.

ANS: D PTS: 2

17. In 2002, the wealthy nations, including the United States, committed themselves to increasing development assistance to poorer nations. Each would spend 0.7 percent of its gross national income on aid by 2015. The Scandinavian countries are already close to that figure. Others have committed themselves to a specific time table to reach that goal. The United States has not. Currently we rank 22nd and dead last among donor nations.

James Traub. "Freedom From Want"

a. Argument; conclusion: Currently we rank ... among donor nations.
b. Argument; conclusion: In 2002, the wealthy nations ... poorer nations.
c. Argument; conclusion: The United States has not.
d. Argument; conclusion: Each would spend ... on aid by 2015.
e. Nonargument.

ANS: E PTS: 2

INSTRUCTIONS: The following problems relate to identifying and evaluating inductive and deductive arguments. Select the best answer for each.

18. Adrian's car has a flat tire. Someone must have slashed it with a knife.
a. Deductive, valid.
b. Deductive, unsound.
c. Inductive, strong.
d. Deductive, invalid.
e. Inductive, weak.

ANS: E PTS: 2

19. Every dancer on the floor has a partner. Hence, there are an even number of dancers on the floor.
a. Deductive, invalid.
b. Inductive, weak.
c. Deductive, valid.
d. Deductive, sound.
e. Inductive, strong.

ANS: C PTS: 2

20. The print at the bottom of this full box of Cheerios says NET WT 15 OZ. Therefore, the contents must weigh about 15 ounces.
a. Inductive, weak.
b. Inductive, uncogent.
c. Deductive, valid.
d. Inductive, strong.
e. Deductive, invalid.

ANS: D PTS: 2

21. No theocracies are true democracies. No secular governments are theocracies. Thus, some secular governments are true democracies.
a. Inductive, strong.
b. Deductive, invalid.
c. Inductive, weak.
d. Deductive, cogent.
e. Deductive, valid.

ANS: B PTS: 2

22. Either Shaun White or Scott Lago won an Olympic gold medal in 2010. Shaun White did not win one in 2010. Thus, Scott Lago did.
    a. Inductive, strong.
    b. Deductive, invalid.
    c. Deductive, valid.
    d. Inductive, cogent.
    e. Inductive, weak.

    ANS: C PTS: 2

23. Graffiti written on the side of this wall says "Crips Rule." Thus, the mayor and city council must be members of the Crips.
    a. Inductive, weak.
    b. Deductive, valid.
    c. Deductive, invalid.
    d. Inductive, cogent.
    e. Inductive, strong.

    ANS: A PTS: 2

24. Amanda is taller than Jacqueline, and Jacqueline is shorter than Laura. Hence, it necessarily follows that Amanda is taller than Laura.
    a. Inductive, weak.
    b. Deductive, invalid.
    c. Inductive, strong.
    d. Deductive, valid.
    e. Deductive, sound.

    ANS: B PTS: 2

25. Sixty percent of the members of the Theta Society drive American cars. Hence, since Kristy is a member of the Theta Society, it is likely that she drives an American car.
    a. Deductive, valid.
    b. Deductive, invalid.
    c. Inductive, cogent.
    d. Inductive, weak.
    e. Inductive, strong.

    ANS: E PTS: 2

26. Frank is a polygamist. Therefore, he has more than one wife.
    a. Deductive, invalid.
    b. Inductive, strong.
    c. Inductive, weak.
    d. Deductive, valid.
    e. Deductive, unsound.

    ANS: D PTS: 2

27. Silvia is a middle-aged, dark haired Protestant woman who supports right-to-life issues. Shelly is also a middle-aged, dark haired Protestant woman. Therefore, she probably also supports right-to-life issues.
    a. Inductive, weak.
    b. Deductive, valid.

c. Inductive, strong.
d. Inductive, cogent.
e. Deductive, invalid.

ANS: A PTS: 2

28. Cancer is a disease that has afflicted humans for thousands of years. Therefore, many of the ancient Romans must have died of cancer.
a. Deductive, valid.
b. Deductive, invalid.
c. Inductive, strong.
d. Inductive, sound.
e. Inductive, weak.

ANS: C PTS: 2

29. Given that $3x + 2 = 14$. It follows that $x = 5$.
a. Deductive, sound.
b. Deductive, invalid.
c. Deductive, valid.
d. Inductive, weak.
e. Inductive, strong.

ANS: B PTS: 2

30. Jennifer's cat Pinky is constantly scratching itself. Apparently Pinky has fleas.
a. Inductive, cogent.
b. Inductive, weak.
c. Deductive, invalid.
d. Deductive, valid.
e. Inductive, strong.

ANS: E PTS: 2

31. If stun guns are safe, then police officers will use them. Stun guns are not safe. Therefore, police officers will not use them.
a. Inductive, uncogent.
b. Deductive, invalid.
c. Inductive, strong.
d. Deductive, valid.
e. Inductive, weak.

ANS: B PTS: 2

32. Right wing columnist and author Michelle Malkin says that the forced relocation of Japanese Americans to internment camps during World war II was really for their own protection. Therefore, we must drop that silly nonsense that this internment was a monstrous injustice, and start thinking of it as a humanitarian endeavor.
a. Deductive, invalid.
b. Inductive, strong.
c. Deductive, valid.
d. Inductive, weak.
e. Deductive, unsound.

ANS: D PTS: 2

33. Given circle *A* inscribed in square *B*. It follows that the area of *B* is greater than the area of *A*.
    a. Inductive, strong.
    b. Deductive, invalid.
    c. Inductive, cogent.
    d. Deductive, valid.
    e. Inductive, weak.

    ANS: D PTS: 2

34. Trees bearing apples, pears, and apricots all thrive in Washington state. It must be the case that all fruit trees thrive in Washington state.
    a. Inductive, weak.
    b. Deductive, sound.
    c. Deductive, invalid.
    d. Deductive, valid.
    e. Inductive, strong.

    ANS: A PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

35. Which of the following are all nonarguments?
    a. Expository passages, generalizations, conditional statements.
    b. Warnings, statements of belief, explanations.
    c. Opinions, illustrations, syllogisms.
    d. Predictions, pieces of advice, reports.
    e. Analogies, causal inferences, propositions.

    ANS: B PTS: 2

36. Which of the following are all inductive arguments?
    a. Predictions, arguments based on signs, arguments from authority.
    b. Arguments based on mathematics, arguments from definition, syllogisms.
    c. Arguments from definition, causal inferences, arguments based on signs.
    d. Arguments from authority, hypothetical syllogisms, arguments from analogy.
    e. Disjunctive syllogisms, arguments from authority, generalizations.

    ANS: A PTS: 2

37. Which of the following are all conclusion indicators?
    a. Consequently, thus, for the reason that.
    b. It follows that, given that, inasmuch as.
    c. Entails that, as, accordingly.
    d. Hence, for this reason, consequently.
    e. Implies that, as indicated by, seeing that.

    ANS: D PTS: 2

38. In the expression "The twin towers of the World Trade Center no longer exist because they were destroyed by terrorists," the statement "They were destroyed by terrorists is called the:
    a. Premise.
    b. Consequent.
    c. Explanans.
    d. Conclusion.
    e. Explanandum.

ANS: C PTS: 2

39. In the expression "If religion dictates what counts as science, then the future of education is doomed," the statement "The future of education is doomed" is called the:
    a. Consequent.
    b. Conditional.
    c. Antecedent.
    d. Explanandum.
    e. Conclusion.

    ANS: A PTS: 2

40. An argument whose conclusion rests on a similarity between two things is:
    a. A cogent argument.
    b. A deductive argument.
    c. A categorical syllogism.
    d. A strong argument.
    e. An argument from analogy.

    ANS: E PTS: 2

41. An argument that proceeds from our knowledge of an effect to a claim about the cause is:
    a. A categorical syllogism.
    b. An inductive argument.
    c. An argument from signs.
    d. A weak argument.
    e. A cogent argument.

    ANS: B PTS: 2

42. If an inductive argument has all true premises and a probably true conclusion, then we know:
    a. The argument is valid.
    b. The argument is strong.
    c. The argument is cogent.
    d. Nothing, as such, about the argument's strength.
    e. The argument is sound.

    ANS: D PTS: 2

43. Which of the following is a necessary condition for being a cat?
    a. Having black fur.
    b. Weighing at least 8 pounds.
    c. Clawing the furniture.
    d. Being a calico.
    e. Being an animal.

    ANS: E PTS: 2

44. Which of the following sentences is a statement?
    a. We recommend that you invest your money in low risk stock.
    b. Why don't we take the afternoon off and go to the beach.
    c. The capital of Nevada is Sacramento.
    d. Do you know where the post office is?
    e. Come inside right this minute and eat your dinner.

    ANS: C PTS: 2

PROBLEM

INSTRUCTIONS: The following problems relate to the counterexample method.

1. **PART A**
   All exercise sessions are healthy activities, so some jogging events are healthy activities, since some exercise sessions are not jogging events.

   Which of the following correctly expresses the form of this argument?

   a. Some E are not J.
      Some J are H.
      All E are H.

   b. All E are H.
      Some E are not J.
      Some J are H.

   c. All E are H.
      Some J are H.
      Some E are not J.

   d. E are H.
      E are not J.
      J are H.

   e. Some J are H.
      Some E are J.
      All E are H.

   PART B
   Which of the following substitutions proves the argument invalid?
   a. E = dogs, H = mammals, J = fish.
   b. E = mammals, H = animals, J = cats.
   c. E = fish, H = animals, J = dogs.
   d. E = cats, H = mammals, J = animals.
   e. E = animals, H = dogs, J = mammals

   ANS:
   Part A: b
   Part B: a

   PTS: 4

2. **PART A**
   If class-action lawsuits are banned, then big business will win. Hence, big business will not win, since class-action lawsuits will not be banned.

   Which of the following correctly expresses the form of this argument?

   a. If C then B.
      Not B.
      Not C.

   b. Not C.
      Not B.
      If C then B.

   c. If C then B.
      Not C.
      Not B.

   d. If C then B.
      B.
      C.

   e. If C then B.
      C.
      B.

   PART B
   Which of the following substitutions proves the argument invalid?
   a. C = Nicole Kidman was beheaded, B = Nicole Kidman is dead.
   b. C = Bob Smith was beheaded, B = Bob Smith is dead.
   c. C = Abraham Lincoln was assassinated, B = Abraham Lincoln is dead.
   d. C = George Washington is dead, B = George Washington was assassinated.
   e. C = George Washington was beheaded, B = George Washington is dead.

ANS:
Part A: c
Part B: e

PTS: 4

3. **PART A**
Some entertainers are not magicians, for some comedians are not magicians and some magicians that are not comedians are entertainers.

Which of the following correctly expresses the form of this argument?

a. Some C are not M.
<u>Some M are E.</u>
Some E are not M.

b. Some M that are not C are E.
<u>Some E are not M.</u>
Some C are not M.

c. Some C are not M.
<u>Some M that are not C are E.</u>
Some E are not M.

d. Some E are not M.
<u>Some C are not M.</u>
Some M that are not C are E.

e. Some E are not M.
<u>Some C are not M.</u>
All M that are not C are E.

PART B
Which of the following substitutions proves the argument invalid?
a. M = mammals, C = animals, E = dogs.
b. M = cats, C = trees, E = animals.
c. M = mammals, C = cats, E = animals.
d. M = animals, C = trees, E = cats.
e. M = fish, C = dogs, E = mammals.

ANS:
Part A: c
Part B: d

PTS: 4

Chapter 1 Test G

MULTIPLE CHOICE

INSTRUCTIONS: The following selections relate to distinguishing arguments from nonarguments and identifying conclusions. Select the best answer for each.

1. The *Titanic* sank on its maiden voyage in 1912 because it collided with an iceberg. Four of the ship's 16 watertight compartments could have been flooded without the ship sinking. However the iceberg tore several gashes in the hull, flooding 5 of these compartments.
   a. Argument; conclusion: The *Titanic* sank on its maiden voyage in 1912.
   b. Argument; conclusion: The iceberg tore several gashes ... of these compartments.
   c. Nonargument.
   d. Argument; conclusion: Four of the ship's watertight compartments ... ship sinking.
   e. Argument; conclusion: The *Titanic* collided with an iceberg.

   ANS: C PTS: 2

2. Every individual is capable of injuring or killing himself. This potentiality is a fundamental expression of human freedom. Self-destructive behavior may be regarded as sinful and penalized by means of informal sanctions. But it should not be regarded as a crime or (mental) disease, justifying or warranting the use of the police powers of the state for its control. Therefore, it is absurd to deprive an adult of a drug (or of anything else) because he might use it to kill himself.

   Thomas Szasz, "The Ethics of Addiction
   a. Argument; conclusion: Every individual is capable of injuring or killing himself.
   b. Argument; conclusion: Self destructive behavior ... informal sanctions.
   c. Nonargument.
   d. Argument; conclusion: This potentiality ... expression of human freedom.
   e. Argument; conclusion: It is absurd to deprive an adult of a drug ... kill himself.

   ANS: E PTS: 2

3. Acid rain is an ecological threat that must be taken seriously. Acid rain has killed the fish in thousands of lakes, and it has caused billions of dollars in damages to important crops. Furthermore, acid rain poses a serious threat to our nation's forests.
   a. Argument; conclusion: Acid rain is an ecological threat ... taken seriously.
   b. Argument; conclusion: Acid rain has killed the fish in thousands of lakes.
   c. Nonargument.
   d. Argument; conclusion: Acid rain poses a serious threat to our nation's forests.
   e. Argument; conclusion: Acid rain has caused ... damage to important crops.

   ANS: A PTS: 2

4. Most fast food restaurants cook French fries and other foods in beef tallow. This is a flavorful shortening high in saturated fat, which has been linked to heart disease. Chicken, which is low in fat, in a fast food sandwich has been found to contain more fat than a pint of ice cream. The reason fast food restaurants use beef tallow is that it makes food more flavorful and it is cheaper than alternative ways of cooking food.

   Dominic Salvatore, *Managerial Economics*, 3rd ed.
   a. Argument; conclusion: Most fast food restaurants cook ... in beef tallow.
   b. Argument; conclusion: Beef tallow makes food more flavorful ... cooking food.
   c. Argument; conclusion: Chicken, which is low in fat ... ice cream.
   d. Nonargument.

e. Argument; conclusion: Beef tallow is a flavorful shortening ... heart disease.

ANS: D PTS: 2

5. If growth can no longer be counted on to provide for all the major wants, private and public, of a society, or to sustain all the peripheral members of a society at a level that keeps a lid on mutinous outbreaks, especially in congested urban centers, then some specification of a nation's most serious needs—its social priorities—and some direction as to how goods are to be allocated among society's members are needed.

Neil W. Chamberlain, *Social Strategy and Corporate Structure*

a. Argument; conclusion: Growth can no longer be counted on ... of a society.
b. Nonargument.
c. Argument; conclusion: Some specification ... are needed.
d. Argument; conclusion: Growth cannot sustain ... members of a society.
e. Argument; conclusion: Growth cannot keep a lid on mutinous outbreaks.

ANS: B PTS: 2

6. High school health clinics across the nation should be permitted to dispense Norplant, the new birth control medication. Teenage pregnancy today is at an all time high, and Norplant is 99 percent effective in preventing pregnancy. Furthermore, a single dose ensures protection for a full five years.
a. Argument; conclusion: Norplant is 99 percent effective in preventing pregnancy.
b. Argument; conclusion: Teenage pregnancy ... preventing pregnancy.
c. Argument; conclusion: High school health clinics across the nation ... medication.
d. Argument; conclusion: A single dose ensures protection for a full five years.
e. Nonargument.

ANS: C PTS: 2

7. The countries of the world today are divided into 2 groups. The more-developed countries, typified by countries in North America and Europe, are those in which population growth is under control and the people enjoy a good standard of living. The less-developed countries, typified by countries in Latin America, Africa, and Asia, are those in which population growth is out of control and the majority of people live in poverty.

Sylvia S. Mader, *Human Biology*, 4th ed.

a. Argument; conclusion: The countries of the ... into two groups.
b. Nonargument.
c. Argument; conclusion: The more developed countries ... standard of living.
d. Argument; conclusion: The less developed countries ... live in poverty.
e. Argument; conclusion: The less developed countries ... Africa, and Asia.

ANS: B PTS: 2

8. There are three familiar states of matter: solid, liquid and gas. Solid objects ordinarily maintain their shape and volume regardless of their location. A liquid occupies a definite volume, but assumes the shape of the occupied portion of its container. A gas maintains neither shape nor volume. It expands to fill completely whatever container it is in.

John W. Hill and Dorris K Kolb, *Chemistry for Changing Times*

a. Nonargument.
b. Argument; conclusion: Solid objects ordinarily maintain ... their location.
c. Argument; conclusion: There are three familiar ... solid, liquid, and gas.
d. Argument; conclusion: A gas maintains neither shape nor volume.
e. Argument; conclusion: A gas expands to fill completely whatever container it is in.

ANS: A PTS: 2

9. Cancer is apt to develop in individuals who exhibit an immunodeficiency. For Example, people with AIDS develop a cancer of the blood vessels called Kaposi's sarcoma. Transplant patients who are on immunosuppressive drugs are more apt to develop lymphomas and Kaposi's sarcoma. Persons who inherit an immunodeficiency are also more apt to develop these cancers.

Sylvia S. Mader, *Human Biology*, 4th ed.

a. Argument; conclusion: Persons who inherit an immunodeficiency ... cancers.
b. Argument; conclusion: Transplant patients ... lymphomas and Kaposi's sarcoma.
c. Argument; conclusion: People with AIDS ... Kaposi's sarcoma.
d. Nonargument.
e. Argument; conclusion: Cancer is apt to develop ... an immunodeficiency.

ANS: E PTS: 2

10. The significance of meat eating for future human evolution was enormous. Not only did it provide a secure source of high quality protein, but as an accidental by product, it made possible the development of larger brains. The nutritive demands of nerve tissue are high—higher in fact than the demands of the other types of tissue in the human body. One can meet these demands on a vegetarian diet, but the overall nutritive value of a given amount of such food is less than that of the same amount of meat.

William A. Haviland, *Cultural Anthropology*, 5th ed.

a. Argument; conclusion: The nutritive demands of nerve tissue ... human body.
b. Argument; conclusion: Not only did it provide a secure source ... larger brains.
c. Nonargument.
d. Argument; conclusion: The significance of meat eating ... was enormous.
e. Argument; conclusion: One can meet these demands ... amount of meat.

ANS: D PTS: 2

11. Bismarck, chancellor of Prussia, harnessed the conservative agenda of keeping the aristocracy in power while promoting the liberal nationalist aim of German unification. He also proved successful at diplomacy with the other great powers. Through three quick and successful wars against Denmark, Austria, and France, he united Germany in 1871 under Prussian leadership.

Steven L. Spiegel, *World Politics in a New Era*

a. Argument; conclusion: He also proved successful ... the other great powers.
b. Argument; conclusion: Through three quick and successful ... Prussian leadership.
c. Nonargument.
d. Argument; conclusion: Bismarck, chancellor of Prussia ... aristocracy in power.
e. Argument; conclusion: Bismarck promoted the liberal nationalist aim of German unification.

ANS: C PTS: 2

12. Liquids and solids expand only slightly when heated, whereas gases expand appreciably when heated. If the gas is not free to expand, its pressure rises when heated. Certain substances may melt, burn, boil, or explode, depending on their composition and structure. Thus, the thermal behavior of a substance is closely related to its structure.

Raymond A. Serway, *Physics for Scientists and Engineers*, 4th ed.

a. Argument; conclusion: Certain substances may melt, burn, or explode ... structure.
b. Argument; conclusion: The thermal behavior of a substance ... its structure.
c. Argument; conclusion: If the gas is not free to expand ... rises when heated.
d. Nonargument.
e. Argument; conclusion: Liquids and solids expand ... when heated.

ANS: B PTS: 2

13. We believe that our company must develop and produce outstanding products that will perform a great service or fill a need for our customers. We believe that our business must be run at an adequate profit. We believe that the services and products we offer must be better than those offered by our competitors. We believe that our business must provide stability of employment and job security for all those who depend on our company for their livelihood.

Robert D. Hay, *et al*, "Introduction to Social Responsibility"

a. Argument; conclusion: We believe that our company ... our customers.
b. Argument; conclusion: We believe that our business must be run ... profit.
c. Nonargument.
d. Argument; conclusion: We believe that our business must provide ... livelihood.
e. Argument; conclusion: We believe that the services ... our competitors.

ANS: C PTS: 2

14. Oxygen makes up almost 21 percent of our present atmosphere. It is essential to modern life for two reasons. First, oxygen is what we must inhale so that our bodies can 'burn' (oxidize) food, releasing energy to our cells. Second, we depend on oxygen for protection from the ultraviolet radiation from the sun that constantly bombards our planet.

Harold V. Thurman, *Essentials of Oceanography*, 5th. ed.

a. Argument; conclusion: Oxygen is essential to modern life.
b. Argument; conclusion: Oxygen makes up almost 21 percent ... atmosphere.
c. Argument; conclusion: We depend on oxygen ... bombards our planet.
d. Argument; conclusion: Oxygen is what we must inhale ... energy to our cells.
e. Nonargument.

ANS: A PTS: 2

15. Chemotherapy for cancer has produced a few dramatic successes. Almost 75% of children with childhood leukemia are completely cured. Hodgkin's disease, a lymphoma, once killed 2 out of 3 patients. Now, a combination therapy of 4 different drugs can wipe out the disease in a matter of months in 3 out of 4 patients, even when the cancer is not diagnosed immediately.

Raymond A. Serway, *Physics for Scientists and Engineers*, 4th ed.

a. Argument; conclusion: Now, a combination therapy ... diagnosed immediately.
b. Argument; conclusion: Almost 75% of children ... are completely cured.
c. Nonargument.
d. Argument; conclusion: Hodgkin's disease ... once killed 2 out of 3 patients.
e. Argument; conclusion: Chemotherapy for cancer ... a few dramatic successes.

ANS: E PTS: 2

16. Cultural anthropology is the study of all aspects of human behavior. It could reasonably be argued that cultural anthropology began with Aristotle, or even earlier. But for practical purposes, the beginnings of cultural anthropology are found in the nineteenth century. This was the century when Europeans became increasingly aware of what they termed "primitive societies" in Africa and Asia.

Robert Jurmain, et al., *Essentials of Physical Anthropology*, 2nd ed.

a. Argument; conclusion: Cultural anthropology is the study ... human behavior.
b. Argument; conclusion: The beginnings ... are found in the nineteenth century.
c. Nonargument.
d. Argument; conclusion: Cultural anthropology began with Aristotle, or even earlier.
e. Argument; conclusion: This was the century when Europeans ... Africa and Asia.

ANS: C PTS: 2

17. Anything can be measured. If a thing can be observed in any way at all, it lends itself to some type of measurement method. No matter how "fuzzy" the measurement is, it's still a measurement if it tells you more than you knew before. And challenges posed by those things most likely to be seen as immeasurable are, virtually always, met by relatively simple measurement methods.

Douglas W. Hubbard, *How to Measure Anything*

a. Argument; conclusion: If a thing can be observed ... measurement method.
b. Argument; conclusion: Anything can be measured.
c. Argument; conclusion: And challenges posed ... simple measurement methods.
d. Argument; conclusion: No matter how "fuzzy" ... more than you knew before.
e. Nonargument.

ANS: B PTS: 2

INSTRUCTIONS: The following problems relate to identifying and evaluating inductive and deductive arguments. Select the best answer for each.

18. Jenny and Francine were awarded National Merit Scholarships and both love mathematics. Jenny breezed through Dr. Marshall's calculus class with an "A". Thus, Francine should do well in that class, too.
a. Inductive, weak.
b. Inductive, sound.
c. Inductive, strong.
d. Deductive, valid.
e. Deductive, invalid.

ANS: C PTS: 2

19. Highway 37 cannot be the road to Brookfield. The road to Brookfield is a gravel road and Highway 37 is paved.
a. Deductive, valid.
b. Deductive, invalid.
c. Inductive, weak.
d. Inductive, strong.
e. Deductive, strong.

ANS: A PTS: 2

20. Since Greenville is one mile from Central City, and Central City is one mile from Harristown, it follows necessarily that Greenville is two miles from Harristown.
a. Inductive, strong.
b. Deductive, cogent.
c. Inductive, weak.
d. Deductive, valid.
e. Deductive, invalid.

ANS: E PTS: 2

21. The *National Questioner* (known for its sensationalist journalism) reports that a young boy in Oklahoma has spoken with Martians. Thus, we must draw the conclusion that Martians do indeed exist.
a. Inductive, strong.
b. Inductive, weak.
c. Deductive, valid.
d. Inductive, cogent.
e. Deductive, weak.

ANS: B PTS: 2

22. Since some politicians are honest people and some honest people are eloquent statesmen, it follows that some politicians are eloquent statesmen.
    a. Inductive, strong.
    b. Inductive, weak.
    c. Inductive, cogent.
    d. Deductive, valid.
    e. Deductive, invalid.

    ANS: E PTS: 2

23. Dennis drives an old beat-up Volkswagen, lives in a cheap apartment, and his clothes are old and bedraggled. Dennis must not have much money.
    a. Inductive, strong.
    b. Deductive, sound.
    c. Deductive, valid.
    d. Deductive, invalid.
    e. Inductive, weak.

    ANS: A PTS: 2

24. Most of the students attending Shoreline Prep have extremely wealthy parents. Since Madeline is a student at Shoreline, it is likely that her parents are wealthy.
    a. Deductive, sound.
    b. Inductive, weak.
    c. Inductive, strong.
    d. Deductive, invalid.
    e. Deductive, valid.

    ANS: C PTS: 2

25. Since figure *A* is a square and the length of one of its sides is exactly one inch, it follows that its area is exactly one square inch.
    a. Inductive, uncogent.
    b. Deductive, invalid.
    c. Inductive, strong.
    d. Inductive, weak.
    e. Deductive, valid.

    ANS: E PTS: 2

26. According to a two hundred year old tradition, the president of the Apex Club has always been a woman. Therefore, the next president will most likely be a woman.
    a. Inductive, weak.
    b. Deductive, cogent.
    c. Deductive, valid.
    d. Inductive, strong.
    e. Deductive, invalid.

    ANS: D PTS: 2

27. Since a is greater than b, and c is greater than d, it necessarily follows that $a + b$ is greater than $c + d$. (a, b, c, d, = real numbers).
    a. Deductive, valid.

b. Inductive, unsound.
c. Deductive, invalid.
d. Inductive, strong.
e. Inductive, weak.

ANS: C PTS: 2

28. Arthur looks jaundiced today. Arthur must have the flu.
a. Deductive, valid.
b. Inductive, strong.
c. Deductive, invalid.
d. Inductive, weak.
e. Deductive, weak.

ANS: D PTS: 2

29. In the window of the Broadway department store a huge sign reads "Sale." Therefore, there must be a sale going on inside.
a. Deductive, valid.
b. Inductive, strong.
c. Inductive, weak.
d. Deductive, strong.
e. Deductive, invalid.

ANS: B PTS: 2

30. Since Gina and Tom have the same natural parents, it follows that they are siblings.
a. Deductive, valid.
b. Inductive, valid.
c. Deductive, invalid.
d. Inductive, strong.
e. Inductive, weak.

ANS: A PTS: 2

31. Many women have been elected to political offices in recent years. Therefore, it is likely that the next American President will be a woman.
a. Inductive, weak.
b. Inductive, strong.
c. Inductive, cogent.
d. Deductive, valid.
e. Deductive, invalid.

ANS: A PTS: 2

32. Claire Connors and Melanie Howard cannot be one and the same person, because Claire was in Berlin during the entire month of January, and at that time Melanie was in Chicago.
a. Inductive, strong.
b. Deductive, valid.
c. Deductive, invalid.
d. Deductive, sound.
e. Inductive, weak.

ANS: B PTS: 2

33. If the public approves of same sex marriages, then same sex marriages will be legalized. The public does not approve of same sex marriages. Therefore, same sex marriages will not be legalized.
    a. Deductive, valid.
    b. Inductive, weak.
    c. Inductive, cogent.
    d. Deductive, invalid.
    e. Deductive, cogent.

    ANS: D PTS: 2

34. Entertainer Rush Limbaugh claims that supply side economics really works. Therefore, we should believe that supply side economics does indeed work.
    a. Deductive, invalid.
    b. Deductive, valid.
    c. Inductive, weak.
    d. Inductive, cogent.
    e. Inductive, strong.

    ANS: C PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

35. Which of the following words is not a conclusion indicator?
    a. Accordingly.
    b. For the reason that.
    c. Wherefore.
    d. Implies that.
    e. Thus.

    ANS: B PTS: 2

36. Which of the following sentences is not a statement?
    a. Car sales are off this year.
    b. The gypsy moth is a threat to agriculture.
    c. Pile these boxes of books in the corner.
    d. Mr. Jarvis was attacked by a grizzly bear.
    e. Your bicycle has a flat tire.

    ANS: C PTS: 2

37. In an explanation, the statement that describes the event to be explained is called the:
    a. Explanandum.
    b. Explicans.
    c. Consequent.
    d. Antecedent.
    e. Explanans.

    ANS: A PTS: 2

38. Which of the following is an argument?
    a. A conditional statement.
    b. A warning.
    c. A hypothetical syllogism.
    d. A piece of advice.
    e. A report.

ANS: C PTS: 2

39. Which of the following is *not* an inductive argument?
    a. An argument based on signs.
    b. A causal inference.
    c. An argument from analogy.
    d. An argument from definition.
    e. A prediction.

    ANS: D PTS: 2

40. A deductive argument always proceeds from:
    a. The particular to the general.
    b. The general to the particular.
    c. The particular to the particular.
    d. The general to the general.
    e. None of these.

    ANS: E PTS: 2

41. Which of the following is a necessary condition for starting a campfire?
    a. Striking a match.
    b. Heating the wood to its combustion temperature.
    c. Pouring gasoline on the wood.
    d. Focusing the rays of the sun with a magnifying glass.
    e. Creating a spark by striking a piece of flint with a piece of steel.

    ANS: B PTS: 2

42. If a deductive argument has a false conclusion then we know the argument is:
    a. Unsound.
    b. Weak.
    c. Valid.
    d. Invalid.
    e. Uncogent.

    ANS: A PTS: 2

43. If an inductive argument has true premises and a probably false conclusion, then we know the argument is:
    a. Strong.
    b. Invalid.
    c. Unsound.
    d. Valid.
    e. Weak.

    ANS: E PTS: 2

44. If the form of a deductive argument allows for a substitution instance having true premises and a true conclusion, then we know:
    a. The argument is strong.
    b. The argument is sound.
    c. Nothing, as such, about the argument's validity.
    d. The argument is valid.
    e. The argument is true.

ANS: C PTS: 2

PROBLEM

INSTRUCTIONS: The following problems relate to the counterexample method.

1. **PART A**
All college professors are teachers, so all teachers are educators, since all college professors are educators.

This argument is correctly symbolized as follows:

a. All C are E.
<u>All T are E.</u>
All C are T.

b. All C are T.
<u>All T are E.</u>
All C are E.

c. All T are E.
<u>All C are T.</u>
All C are E.

d. All T are E.
<u>All C are E.</u>
All C are T.

e. All C are T.
<u>All C are E.</u>
All T are E.

PART B
Which of the following substitutions proves the argument invalid?
a. C = mammals, E = animals, T = fish.
b. C = cats, E = mammals, T = animals.
c. C = animals, E = mammals, T = cats.
d. C = dogs, E = animals, T = mammals.
e. C = cats, E = dogs, T = mammals.

ANS:
Part A: e
Part B: b

PTS: 4

2. **PART A**
If Dorothy misses her plane, then she will arrive late for the wedding. Therefore, Dorothy will miss her plane, because she will certainly arrive late for the wedding.

This argument is correctly symbolized as follows:

a. If M then A.
<u>A</u>
M

b. If M then A.
<u>M</u>
A

c. If S then P.
<u>If A then S.</u>
If P then A.

d. All M are A.
<u>All A are S.</u>
All S are M.

e. S are P.
<u>A are C.</u>
S are A.

PART B
Which of the following substitutions proves the argument invalid?
a. S = George Washington committed suicide, P = he is dead, M = Abraham Lincoln committed suicide.
b. M = George Smith committed suicide, A = George Smith is dead.
c. M = Abraham Lincoln committed suicide, A = Abraham Lincoln is dead.
d. M = Abraham Lincoln is dead, A = Abraham Lincoln committed suicide.

e. M = cats, A = mammals, M = animals.

ANS:
Part A: a
Part B: c

PTS: 4

3. **PART A**
Some Americans are blond women, since some Americans are blond, and some Americans are women.

Which of the following is a correct symbolization of this argument?

a. Some A are B.
<u>Some A are BW.</u>
Some A are W.

b. Some A are W.
<u>Some A are B.</u>
Some B are W.

c. Some A are B.
<u>Some B are BW.</u>
Some A are BW.

d. Some A are B.
<u>Some A are W.</u>
Some A are BW.

e. Some A are BW.
<u>Some A are B.</u>
Some A are W.

PART B
Which of the following substitutions proves the argument invalid?
a. A = apples, B = red, W = fruits.
b. A = fruits, B = green, W = apples.
c. A = lemons, B = purple, W = fruits.
d. A = fruits, B = yellow, W = lemons.
e. A = fruits, B = purple, W = lemons.

ANS:
Part A: d
Part B: e

PTS: 4

Chapter 1 Test H

MULTIPLE CHOICE

INSTRUCTIONS: The following selections relate to distinguishing arguments from nonarguments and identifying conclusions. Select the best answer for each.

1. Most partnerships have difficulty attracting substantial amounts of capital. This is generally not a problem for a slow growing business. But if a business's products or services really catch on, the difficulty in attracting capital becomes a real drawback. For these reasons, many growth companies, which begin life as a proprietorship or partnership, at some point find it necessary to convert to a corporation.

   Eugene F. Brigham, *Financial Management: Theory and Practice*

   a. Argument; conclusion: This is generally not a problem ... business.
   b. Nonargument.
   c. Argument; conclusion: But if a business's products ... becomes a real drawback.
   d. Argument; conclusion: Many growth companies ... to convert to a corporation.
   e. Argument; conclusion: Most partnerships have difficulty ... amounts of capital.

   ANS: D PTS: 2

2. The world's oceans are salty because the water has dissolved salt from rocks. Streams and rivers flowing over rocks for eons have carried the salt to the sea. Also, water on the ocean floor flows into thermal vents, where it becomes heated and dissolves salt from the oceanic crust. Finally, water in the vicinity of submarine volcanoes dissolves salt from the molten lava.

   April Holladay, "Seas Are Salty But Don't Get Any Saltier"

   a. Nonargument.
   b. Argument; conclusion: The world's oceans are salty.
   c. Argument; conclusion: The water has dissolved salt from rocks.
   d. Argument; conclusion: Streams and rivers ... salt to the sea.
   e. Argument; conclusion: Water in the vicinity ... molten lava.

   ANS: A PTS: 2

3. No theorist has more emphatically stressed the social determinants of personality than Erich Fromm. As a humanistic personologist, Fromm argued that a person's behavior can be understood only in the light of cultural forces existing at a particular moment in history. He believed that needs unique to the human being evolved through the history of humankind and that different social systems have influenced their expression.

   Larry A. Hjelli and Daniel J. Ziegler, *Personality Theories*

   a. Argument; conclusion: No theorist has more emphatically ... Erich Fromm.
   b. Nonargument.
   c. Argument; conclusion: He believed that needs ... history of humankind.
   d. Argument; conclusion: He believed that different social systems ... expression.
   e. Argument; conclusion: As a humanistic personologist ... moment in history.

   ANS: B PTS: 2

4. Tobacco smoke is a much deadlier carcinogen and triggers a broader variety of cancers than previously believed. A new study provides definitive evidence that secondhand smoke increases the risk of those exposed by 20%. Also, the study firmly links smoking to stomach, liver, cervical, and kidney cancer, as well as to myeloid leukemia. Such links were previously suspected but not proved.

   Thomas Maugh II, "Smoking Goes from Bad to Worse"

a. Argument; conclusion: The study firmly links ... myeloid leukemia.
b. Argument; conclusion: Such links were previously suspected but not proved.
c. Argument; conclusion: Tobacco smoke is a much deadlier ... believed.
d. Argument; conclusion: A new study provides ... those exposed by 20%.
e. Nonargument.

ANS: C PTS: 2

5. All algae photosynthesize their own food, as plants do. Algae are also widely distributed in bodies of fresh water and in oceans. Because they are so numerous and because they capture energy from sunlight in the food they make, algae are an important source of food for other organisms.

Jacquelyn C. Black, *Microbiology: Principles and Explorations*

a. Argument; conclusion: They capture energy from sunlight in the food they make
b. Nonargument.
c. Argument; conclusion: All algae photosynthesize their own food, as plants do.
d. Argument; conclusion: They are so numerous
e. Argument; conclusion: Algae are an important source of food for other organisms.

ANS: E PTS: 2

6. A distinction is often made between management accounting and financial accounting. Management accounting focuses on internal reporting. It measures and reports financial and nonfinancial information that helps managers make decisions to fulfill the goals of an organization. Financial accounting focuses on reporting to external parties. It measures and records business transactions and provides financial statements issued to investors, government regulators, and other interested parties.

Charles T. Horngren, *Cost Accounting, A Managerial Emphasis*, 13th ed.

a. Nonargument.
b. Argument; conclusion: Management accounting focuses on internal reporting.
c. Argument; conclusion: A distinction is often made ... financial accounting.
d. Argument; conclusion: It measures and records business transactions ... parties.
e. Argument; conclusion: Financial accounting focuses on ... external parties.

ANS: A PTS: 2

7. Governments do many things. They wage war or encourage peace, and they cultivate or restrict international trade. They open their borders to the exchange of ideas or they close them. They tax their populations heavily or lightly, and through different means, allocate resources for education, health and welfare, or leave such matters to others.

Gabriel A. Almond, *et al*., *Comparative Politics Today*, 7th ed.

a. Argument; conclusion: They wage war ... international trade.
b. Argument; conclusion: They tax ... leave such matters to others.
c. Nonargument.
d. Argument; conclusion: They open their borders ... or they close them.
e. Argument; conclusion: Governments do many things.

ANS: C PTS: 2

8. The observational method is extremely useful in helping us describe social behavior. The correlational method is extremely useful in helping us understand what aspects of social behaviors are related. However, only a properly executed experiment allows us to draw conclusions about cause and effect. For this reason, the experimental method is the most commonly used research design in social psychology.

Elliot Aronson, *et al*., *Social Psychology*

a. Argument; conclusion: Only a properly executed ... cause and effect.
b. Argument; conclusion: The experimental method ... in social psychology.

c. Argument; conclusion: The observational method ... social behavior.
d. Argument; conclusion: The correlational method ... are related.
e. Nonargument.

ANS: B PTS: 2

9. Large groups of prospective jurors are dispatched to courtrooms where they sit around for three to four days. Then attorneys and judges, in between other extensive court business, query each prospective juror over and over again with the same time-consuming questions to see if the juror should be excused, picked, or challenged. The process is maddening to watch and listen to. More often than not, after being required to report to the courtroom for three to four days the prospective jurors, in droves, are dismissed.

Alan V. Weinberg, Letter to the Editor

a. Argument; conclusion: More often than not ... are dismissed.
b. Argument; conclusion: The process is maddening to watch and listen to.
c. Argument; conclusion: Attorneys and judges ... or challenged.
d. Nonargument.
e. Argument; conclusion: Large groups of prospective jurors ... four days.

ANS: D PTS: 2

10. If banks are prevented from engaging in risky practices, predatory lending is criminalized, trading in derivatives is made transparent and backed up by capital, and Wall Street lobbyists are held in check, then accountability and responsibility will be restored to the financial system, "too big to fail" will become a thing of the past, and a repeat of the Great Recession will be avoided.
a. Argument; conclusion: Accountability and responsibility ... financial system.
b. Nonargument.
c. Argument; conclusion: Banks are prevented from engaging in risky practices.
d. Argument; conclusion: Wall Street lobbyists are held in check.
e. Argument; conclusion: A repeat of the Great Recession will be avoided.

ANS: B PTS: 2

11. The number of protons in an atom's nucleus determines its atomic number and the name of the element. For example, all atoms with six protons are carbon atoms, and all those with eight protons are oxygen atoms. Free atoms (those not combined with other atoms) have the same number of electrons as protons. Therefore, carbon has six electrons to match its six protons, and oxygen has eight electrons to match its eight protons.

Frederick K. Lutgens, *et al.*, *Foundations of Earth Science*, 6th ed.

a. Argument; conclusion: The number of protons ... the name of the element.
b. Argument; conclusion: Free atoms ... same number of electrons as protons.
c. Nonargument.
d. Argument; conclusion: For example, all atoms with six protons ... oxygen atoms.
e. Argument; conclusion: Carbon has six electrons ... to match its eight protons.

ANS: E PTS: 2

12. Microbiologists work in a variety of settings. Some work in universities where they are likely to teach, do research, and train students to do research. Others work in industrial laboratories to develop or manufacture antibiotics, vaccines, or similar biological products. Even some law firms are hiring microbiologists to help with the complexities of patenting new genetically engineered organisms.

Jacquelyn C. Black, *Microbiology: Principles and Explorations*

a. Argument; conclusion: Others work in industrial laboratories ... products.
b. Argument; conclusion: Microbiologists work in a variety of settings.
c. Nonargument.

d. Argument; conclusion: Even some law firms ... engineered organisms.
e. Argument; conclusion: Some work in universities ... research.

ANS: C PTS: 2

13. The earliest models of the solar system employed what Aristotle, and Plato before him, had taught was the perfect form: the circle. The simplest possible arrangement—uniform motion around a circle having Earth as its center—provided a fairly good approximation to the orbits of the Sun and the Moon. But it could not account for the observed variations in planetary brightness or their retrograde motion. Thus, a more complex model was needed to describe the motion of the planets.

Eric Chaison and Steve McMillan, *Astronomy Today*, 3rd ed.

a. Argument; conclusion: A more complex model ... motion of the planets.
b. Argument; conclusion: But it could not account ... their retrograde motion.
c. Nonargument.
d. Argument; conclusion: The simplest possible arrangement ... Sun and Moon.
e. Argument; conclusion: The earliest models of the solar system ... the circle.

ANS: A PTS: 2

14. Attempts to use solar energy on a large scale could have profound results. For example, it could change the albedo of the earth. This is the percentage of sunlight that is reflected back into space. Such an occurrence could cause a substantial change in the temperature of the earth, just as any other energy conversion does, making the planet too hot for life.

Robert S. Boikess and Edward Edelson, *Chemical Principles*

a. Argument; conclusion: This is the percentage of sunlight ... back into space.
b. Argument; conclusion: Such an occurrence could cause ... too hot for life.
c. Nonargument.
d. Argument; conclusion: It could change the albedo of the earth.
e. Argument; conclusion: Attempts to use solar energy ... profound results.

ANS: E PTS: 2

15. The right to healthcare has become a consumer issue. Historically, the poor either had to be satisfied with a decreased quality of care or to do without healthcare entirely. Today many citizens view equal access to healthcare as everyone's right. An ongoing debate centers on who should pay for this care.

Ruth F. Craven and Constance J. Hirnle, *Fundamentals of Nursing*

a. Argument; conclusion: Historically, the poor ... do without healthcare entirely.
b. Nonargument.
c. Argument; conclusion: Today many citizens ... everyone's right.
d. Argument; conclusion: An ongoing debate centers on who should pay for this care.
e. Argument; conclusion: The right to healthcare has become a consumer issue.

ANS: B PTS: 2

16. We are immersed in life. We breathe it in, we walk on it, we touch it. Each footstep on a fertile lawn or forest mat will send tremors to trillions of bacteria, millions of algae, fungi, and protozoa, and hundreds of insects and worms. The skin on our bodies, when viewed microscopically, is a teeming matrix of tiny caverns filled with bacteria, viruses, and mites. So dense are the unseen life forms on our bodies that they form an almost complete shell about each of us.

Gary S. Moore, *Living with the Earth*, 3rd ed.

a. Argument; conclusion: Each footstep on a fertile lawn ... of insects and worms.
b. Nonargument.
c. Argument; conclusion: We breathe it in, we walk on it, we touch it.
d. Argument; conclusion: We are immersed in life.
e. Argument; conclusion: So dense are the unseen life forms ... about each of us.

ANS: D PTS: 2

17. The mineral source of many manufactured items is not commonly known. For example, few people are aware that pencil lead does not contain lead metal but is really made of the soft black mineral called graphite. Talcum powder is ground-up rock made from the mineral talc. And the common mineral quartz is the main ingredient in ordinary glass and is the source of silicon for computer chips.

Frederick K. Lutgens, *et al*., *Foundations of Earth Science*, 6th ed.

a. Nonargument.
b. Argument; conclusion: Talcum powder ... made from the mineral talc.
c. Argument; conclusion: The mineral source ... is not commonly known.
d. Argument; conclusion: And the common mineral quartz ... computer chips.
e. Argument; conclusion: For example, few people are aware ... called graphite.

ANS: C PTS: 2

INSTRUCTIONS: The following problems relate to identifying and evaluating inductive and deductive arguments. Select the best answer for each.

18. The tag on this new sports coat says that the price is marked down to $49.95. Therefore, the current price must be $49.95.
a. Deductive, valid.
b. Inductive, strong.
c. Inductive, weak.
d. Deductive, invalid.
e. Inductive, cogent.

ANS: B PTS: 2

19. Michelle is an agnostic. Therefore, she must not have any firm belief in God.
a. Deductive, invalid.
b. Inductive, strong.
c. Inductive, weak.
d. Deductive, valid.
e. Deductive, sound.

ANS: D PTS: 2

20. Professional football is the modern day equivalent of the Roman gladiatorial games. Therefore, since it was expected that gladiators would kill their opponents, no one should complain if professional football players injure or kill their opponents.
a. Inductive, weak.
b. Deductive, valid.
c. Deductive, invalid.
d. Deductive, cogent.
e. Inductive, strong.

ANS: A PTS: 2

21. It's easy for budding stars to make it big in Hollywood. Look at Dustin Hoffman. He was instantly famous after his initial role in *The Graduate*.
a. Deductive, sound.
b. Deductive, invalid.
c. Inductive, strong.
d. Deductive, valid.

e. Inductive, weak.

ANS: E PTS: 2

22. Some princes are not military officers, since some reigning monarchs are not military officers and some princes are reigning monarchs.
    a. Deductive valid.
    b. Inductive, weak.
    c. Deductive, invalid.
    d. Inductive, strong.
    e. Inductive, sound.

    ANS: C PTS: 2

23. The chief of the fire department issued a report stating that residential fires are down slightly from the prior year. Thus, it must be the case that residential fires are slightly down this year.
    a. Inductive. strong.
    b. Deductive, invalid.
    c. Inductive, weak.
    d. Deductive, sound.
    e. Deductive, valid.

    ANS: A PTS: 2

24. Given a right triangle with one 30° angle. It follows that the other angle is 55°.
    a. Inductive, cogent.
    b. Deductive, valid.
    c. Inductive, strong.
    d. Deductive, invalid.
    e. Inductive, weak

    ANS: D PTS: 2

25. Either the Republicans will be voted out or the economy will suffer. Therefore, the economy will suffer, because the Republicans will not be voted out.
    a. Inductive, strong.
    b. Deductive, valid.
    c. Deductive, invalid.
    d. Inductive, weak.
    e. Inductive, sound.

    ANS: B PTS: 2

26. The finger prints on the gun match those of the defendant. Therefore, the defendant must have handled the gun.
    a. Inductive, weak.
    b. Deductive, valid.
    c. Deductive, invalid.
    d. Deductive, uncogent.
    e. Inductive, strong.

    ANS: E PTS: 2

27. If people can talk to the dead, then the dead are still alive. People cannot talk to the dead. Therefore, the dead are not still alive.
    a. Deductive, valid.

b. Inductive, strong.
c. Deductive, invalid.
d. Inductive, weak.
e. Deductive, sound.

ANS: C PTS: 2

28. Judy and her friend Claire both love post impressionist painting, and Judy thought that the Gauguin exhibit at the museum was superb. Therefore, probably Claire would like that exhibit, too.
a. Deductive, invalid.
b. Deductive, sound.
c. Inductive, weak.
d. Deductive, valid.
e. Inductive, strong.

ANS: E PTS: 2

29. The billboard ad for Joe's Used Cars says that Joe has fantastic deals. Therefore, it must be the case that Joe does indeed have fantastic deals.
a. Deductive, invalid.
b. Inductive, unsound.
c. Deductive, valid.
d. Inductive, weak.
e. Inductive, strong.

ANS: D PTS: 2

30. Andrea is the sister of Henry, and Henry is the brother of Bill. Thus, Bill is the brother of Andrea.
a. Deductive, sound.
b. Deductive, valid.
c. Inductive, weak.
d. Deductive, invalid.
e. Inductive, strong.

ANS: B PTS: 2

31. The emerald is more expensive than the diamond, and the diamond is less expensive than the sapphire. Therefore, it necessarily follows that the emerald is more expensive than the sapphire.
a. Deductive, invalid.
b. Inductive, weak.
c. Deductive, valid.
d. Inductive, uncogent.
e. Inductive, strong.

ANS: A PTS: 2

32. In a random sample of 50 students, only 15 said that they regularly read a newspaper. Therefore, probably less than 50% of the student body regularly reads a newspaper.
a. Deductive, valid.
b. Deductive, invalid.
c. Inductive, strong.
d. Inductive, weak.
e. Inductive, uncogent.

ANS: C PTS: 2

33. Given square *A* inscribed in circle *B*. It follows that the area of *A* is less than the area of *B*.
    a. Inductive, weak.
    b. Inductive, strong.
    c. Deductive, valid.
    d. Inductive, cogent.
    e. Deductive, invalid.

    ANS: C PTS: 2

34. The Chairman of Big Tex Oil Company stated that oil company executives are drastically underpaid. Therefore, it must be the case that oil company executives are indeed underpaid, just as the Chairman says.
    a. Deductive, sound.
    b. Inductive, weak.
    c. Inductive, strong.
    d. Deductive, valid.
    e. Deductive, invalid.

    ANS: B PTS: 2

    INSTRUCTIONS: Select the correct answer for each multiple choice question.

35. Which of the following words is a premise indicator?
    a. It must be the case that.
    b. Thus.
    c. Consequently.
    d. Hence.
    e. Given that.

    ANS: E PTS: 2

36. Which of the following words is a conclusion indicator?
    a. Because.
    b. For.
    c. Implies that.
    d. Inasmuch as.
    e. For the reason that.

    ANS: C PTS: 2

37. Which of the following sentences is a statement?
    a. Shut the water off now.
    b. What is the capital of Idaho?
    c. Watch out!
    d. I suggest you study for your next test.
    e. My car is painted green.

    ANS: E PTS: 2

38. Which of the following is a deductive argument?
    a. An argument from definition.
    b. An argument from analogy.
    c. A prediction.
    d. A conditional statement.
    e. An illustration.

ANS: A PTS: 2

39. Which of the following is an inductive argument?
    a. A disjunctive syllogism.
    b. A causal inference.
    c. An argument from mathematics.
    d. A hypothetical syllogism.
    e. An expository passage.

    ANS: B PTS: 2

40. Which of the following is a necessary condition for becoming intoxicated?
    a. Drinking a 12-ounce can of beer in an hour.
    b. Consuming alcohol.
    c. Having a corkscrew.
    d. Having a glass.
    e. Drinking a pint of whiskey in an hour.

    ANS: B PTS: 2

41. Which of the following is a sufficient condition for being a fish?
    a. Being able to swim.
    b. Having a tail.
    c. Having a bony skeleton.
    d. Being a halibut.
    e. Laying eggs.

    ANS: D PTS: 2

42. If a deductive argument has a false premise and a false conclusion, then we know:
    a. It is invalid.
    b. It is valid.
    c. Nothing, as such about its validity.
    d. It is sound.
    e. It is weak.

    ANS: C PTS: 2

43. If an inductive argument has all true premises and a probably false conclusion, then we know:
    a. It is weak.
    b. It is cogent.
    c. It is strong.
    d. It is valid.
    e. It is invalid.

    ANS: A PTS: 2

44. The person usually credited with having originated logic is:
    a. De Morgan.
    b. Plato.
    c. Leibniz.
    d. Aristotle.
    e. Boole.

    ANS: D PTS: 2

PROBLEM

INSTRUCTIONS: The following problems relate to the counterexample method.

1. **PART A**
All real libraries are buildings containing books, so some presidential libraries are not real libraries, since some buildings containing books are not presidential libraries.

The form of this argument is:

a. Some P are not R.
Some B are not P.
All R are B.

b. Some P are not R.
All R are B.
Some B are not P.

c. Some B are not P.
Some P are not R.
All R are B.

d. All R are B.
Some P are not R.
Some B are not P.

e. All R are B.
Some B are not P.
Some P are not R.

PART B
Which of the following substitutions proves the argument invalid?
a. R = mammals, B = animals, P = cats.
b. B = mammals, P = cats, R = dogs.
c. P = animals, R = cats, B =mammals.
d. R = fish, B = animals, P = dogs.
e. B = fish, R = animals, P = cats.

ANS:
Part A: e
Part B: a

PTS: 4

2. **PART A**
If allergies are caused by viruses, then a vaccine can be developed. Thus, a vaccine cannot be developed, because allergies are not caused by viruses.

The form of this argument is:

a. All A are V.
No A are D.
No V are D.

b. If A then V.
Not V
Not A

c. Not V
Not A
If A then V.

d. If A then V.
Not A
Not V

e. If A are C then V can D.
A are not C.
V cannot D.

PART B
Which of the following substitutions proves the argument invalid?
a. A = cats, C = animals, V = dogs, D = climb trees.
b. A = Napoleon was killed in a plane crash. V = Napoleon is dead.
c. A = Robert was assassinated, V = Robert is dead.
d. A = cats, V = animals, D = mammals.
e. A = Shakespeare suffered a heart attack, V = Shakespeare is dead.

ANS:
Part A: d
Part B: b

PTS: 4

3. **PART A**
If the economy crashes, then stock prices fall, because if stock prices fall, then pension funds shrink, and if the economy crashes then pension funds shrink.

The form of this argument is:

a. If E then S.
<u>If E then P.</u>
If S then P.

b. If E then S.
<u>If S then P.</u>
If E then P.

c. If S then P.
<u>If E then P.</u>
If E then S.

d. All S are P.
<u>All E are P.</u>
All E are S.

e. If S then P.
<u>If E then S.</u>
If E then P.

PART B
Which of the following substitutions proves the argument invalid?
a. S = Jessica Biel is a man, P = Jessica Biel is a human, E = Jessica Biel is a woman.
b. S = cats, P = animals, E = dogs.
c. S = Jessica Biel is a woman, P = Jessica Biel is a human, E = Jessica Biel is an actress.
d. S = Matt Damon is an actor, P = Matt Damon is a lawyer, E = Matt Damon is a professional.
e. S = Susan is rich, P = Susan is famous, E = Susan is happy.

ANS:
Part A: c
Part B: a

PTS: 4

Chapter 1 Test I

MULTIPLE CHOICE

INSTRUCTIONS: The following selections relate to distinguishing arguments from nonarguments and identifying conclusions. Select the best answer for each.

1. Earth's distance from the sun has little to do with the seasons. The seasons are caused by the tilt of the Earth on its axis as it revolves around the sun. This tilt causes some parts of the Earth to get slanting rays of sunlight some of the year and vertical rays of sunlight at other times. When a hemisphere of the Earth is tilted toward the sun, it is summer in that hemisphere.

   Gary S. Moore, *Living with the Earth*, 3rd ed.

   a. Nonargument.
   b. Argument; conclusion: The seasons are caused ... as it revolves around the sun.
   c. Argument; conclusion: This tilt causes some parts ... sunlight at other times.
   d. Argument; conclusion: When a hemisphere of the Earth ... in that hemisphere.
   e. Argument; conclusion: Earth's distance from the sun ... the seasons.

   ANS: A PTS: 2

2. The colors of all glowing objects have the same origin: They come from atoms and molecules that have been excited to states of high energy. Atoms in burning fireworks and stars become excited by absorbing energy as heat. They then throw off their excess energy as light. The colors emitted by an atom depend on how its electrons are arranged. So by investigating the colors an atom emits, we can determine its internal structure.

   Loretta Jones and Peter Atkins, *Chemistry*, 4th ed.

   a. Argument, conclusion: The colors emitted by an atom ... electrons are arranged.
   b. Argument, conclusion: The colors of all glowing objects have the same origin.
   c. Nonargument.
   d. Argument, conclusion: They come from atoms ... states of high energy.
   e. Argument; conclusion: By investigating the colors ... its internal structure.

   ANS: E PTS: 2

3. A rainbow sometimes occurs after a storm because the droplets of water in the air refract and reflect rays of light from the sun. The angle of refraction is different for different wavelengths of light, and this accounts for the separation of colors in the rainbow.
   a. Argument, conclusion: The droplets of water in the air ... light from the sun.
   b. Argument, conclusion: The angle of refraction ... wavelengths of light.
   c. Nonargument.
   d. Argument, conclusion: A rainbow sometimes occurs after a storm.
   e. Argument, conclusion: This accounts for the separation of colors in the rainbow.

   ANS: C PTS: 2

4. Cows' milk is hardly the perfect food, as the American Dairy Association would have us believe. Whole milk consumed in large quantities can raise blood cholesterol levels and contribute to heart disease. Studies have indicated a connection between the sugars in milk and ovarian cancer. The proteins in cows' milk can cause the body to develop antibodies that can lead to diabetes, and in a fourth of the population milk causes bloating, flatulence, and sometimes diarrhea.

   Jane Brody, "Debate over Milk: Time to Look at the Facts"

   a. Argument, conclusion: The proteins in cows' milk ... sometimes diarrhea.
   b. Argument, conclusion: Whole milk consumed ... contribute to heart disease.

c. Argument, conclusion: Studies have indicated ... ovarian cancer.
d. Argument; conclusion: Cows' milk is hardly ... would have us believe.
e. Nonargument.

ANS: D PTS: 2

5. Although accounting has made its most dramatic progress in the field of business, the accounting function is vital to every unit of our society. An individual must account for his or her income and must file income tax returns. Often an individual must supply personal accounting information in order to buy a car or home, to qualify for a college scholarship, to secure a credit card or to obtain a bank loan. The federal government, the states, the cities, the school district: all must use accounting as a basis for controlling their resources and measuring their accomplishments.

Walter B. Meigs and Robert F. Meigs, *Accounting*, 6th ed.

a. Nonargument.
b. Argument; conclusion: The accounting function ... every unit of our society.
c. Argument, conclusion: The federal government ... their accomplishments.
d. Argument, conclusion: Often an individual ... obtain a bank loan.
e. Argument, conclusion: Although accounting ... every unit of our society.

ANS: B PTS: 2

6. If wind turbines are extensively deployed, solar power systems are installed, bioenergy technologies are exploited, electric cars are perfected and mass produced, and a high-speed rail network is constructed, then the nation will be weaned off its addiction to oil, climate change will be slowed, and billions of dollars in oil money will be redirected from nations that hate us to improving our own standard of living.
a. Argument, conclusion: Billions of dollars in oil money ... standard of living.
b. Argument, conclusion: The nation will be weaned off its addiction to oil.
c. Argument, conclusion: Wind turbines are extensively deployed.
d. Nonargument.
e. Argument, conclusion: Electric cars are perfected and mass produced.

ANS: D PTS: 2

7. Social psychologists conduct research into areas such as bystander intervention, prejudice, conformity, aggression, and obedience to authority. However, in order to gain insight into such critical issues, researchers must create vivid events that are involving for their participants. Some of these events, by their very nature, are likely to produce a degree of discomfort in the participants, such as witnessing someone having a seizure. Thus, what is required for good science and what is required for ethical science can be contradictory.

Elliot Aronson, *et al*., *Social Psychology*

a. Argument, conclusion: Some of these events ... someone having a seizure.
b. Argument, conclusion: Social psychologists conduct ... obedience to authority.
c. Nonargument.
d. Argument, conclusion: In order to gain insight ... involving for their participants.
e. Argument; conclusion: What is required for good science ... contradictory.

ANS: E PTS: 2

8. Each element and compound is a pure substance. However, most materials are neither single elements nor single compounds. Instead, they are mixtures of these simple substances, with one substance mingled with another. Thus, gasoline is a mixture of hydrocarbons and additives blended together to achieve efficient combustion.

Loretta Jones and Peter Atkins, *Chemistry: Molecules, Matter, and Change*, 4th ed.

a. Nonargument.

b. Argument, conclusion: They are mixtures ... one substance mingled with another.
c. Argument, conclusion: Most materials are neither ... nor single compounds.
d. Argument, conclusion: Each element and compound is a pure substance.
e. Argument, conclusion: Gasoline is a mixture ... achieve efficient combustion.

ANS: A PTS: 2

9. Musical instruments are classed into groups: voices, strings, woodwinds, brass and percussion. Although they can be classified as wind, string, or percussion instruments, keyboard instruments are often considered separately. Operated by air under pressure, the human voice is technically a wind instrument. In recent times the computer and other electronic media have emerged as new means of producing music.

Robert Hickok, *Exploring Music*

a. Argument, conclusion: Although they can be classified ... considered separately.
b. Argument, conclusion: Musical instruments ... brass and percussion.
c. Nonargument.
d. Argument, conclusion: In recent times ... new means of producing music.
e. Argument, conclusion: Operated by air under pressure ... wind instrument.

ANS: C PTS: 2

10. Alloys in which copper is the chief constituent are used more widely than pure copper and have more desirable properties. Bronze, an alloy of copper and tin, is easier to cast, harder, and less malleable than pure copper. Bronze dominated early technology before iron came into use. Brass is an alloy of copper and zinc with multitudinous uses. Alloys of copper, nickel, and zinc, called nickel silver, have high resistance to corrosion and wear and are used as bases for silver plating and in costume jewelry.

Robert Boikess and Edward Edelson, *Chemical Principles*

a. Argument, conclusion: Bronze dominated early technology ... came into use.
b. Argument; conclusion: Alloys in which copper ... more desirable properties.
c. Argument, conclusion: Alloys of copper, nickel, and zinc ... costume jewelry.
d. Argument, conclusion: Brass is an alloy of copper and zinc ... multitudinous uses.
e. Nonargument.

ANS: B PTS: 2

11. Developing accounting information in conformity with generally accepted accounting principles is called *financial accounting*, because this information is designed to summarize the financial position and operating results of a business entity. Financial accounting concepts apply to all types and sizes of business organizations. These concepts are useful to decision makers in both business and government in evaluating a wide range of economic issues.

Walter B. Meigs and Robert F. Meigs, *Accounting*, 6th ed.

a. Nonargument.
b. Argument, conclusion: Financial accounting concepts ... business organizations.
c. Argument, conclusion: These concepts are useful ... economic issues.
d. Argument, conclusion: Developing accounting ... *financial accounting*.
e. Argument, conclusion: This information is designed ... business entity.

ANS: A PTS: 2

12. We can distinguish three aspects of any sound. First, there must be a *source* for a sound; and as with any source, the source of a sound wave is a vibrating object. Second, the energy is transferred from the source in the form of longitudinal sound *waves*. And third, the sound is *detected* by an ear or an instrument.

Douglas C. Giancoli, *Physics: Principles with Applications*, 5th ed.

a. Argument, conclusion: Second, the energy ... longitudinal sound *waves*.

b. Argument, conclusion: Third, the sound is *detected* by an ear or an instrument.
c. Argument, conclusion: First, there must be a *source* ... vibrating object.
d. Nonargument.
e. Argument, conclusion: We can distinguish three aspects of any sound.

ANS: D PTS: 2

13. Nearly all philosophers and neuroscientists reject mind-body dualism. The primary objection is that that it conflicts with the law of conservation of matter and energy in physics. The only way to accelerate matter or transform energy, including the matter and energy in your body, is to act upon it with other matter or energy. For these reasons, if your mind is going to influence the matter or energy of your brain or any other part of your body, your mind must itself be composed of matter or energy.

James W. Kalat, *Biological Psychology*, 7th ed.

a. Argument, conclusion: The only way to accelerate ... other matter or energy.
b. Argument, conclusion: If your mind is going to influence ... matter or energy.
c. Argument, conclusion: The primary objection ... matter and energy in physics.
d. Nonargument.
e. Argument, conclusion: Nearly all philosophers ... mind-body dualism.

ANS: B PTS: 2

14. Whistleblowing is a morally ambiguous activity on a complex concatenation of grounds: It necessarily involves a betrayal of trust on behalf of a public interest which itself is on some occasions morally ambiguous. It indicts otherwise morally competent individuals and organizations concerned with being perceived as legitimate. Sometimes it arouses public opinion, a frequently contaminated process.

Natalie Dandekar, "Can Whistleblowing Be Fully Legitimated?"

a. Argument, conclusion: It necessarily involves ... occasions morally ambiguous.
b. Argument, conclusion: Sometimes it arouses ... contaminated process.
c. Argument; conclusion: Whistleblowing is a morally ambiguous activity.
d. Argument, conclusion: It indicts otherwise morally competent ... as legitimate.
e. Nonargument.

ANS: C PTS: 2

15. A mineral is a naturally occurring inorganic solid. It possesses a definite chemical structure, which gives it a unique set of physical properties. When the term *mineral* is used by geologists, only those substances that fulfill these precise conditions are considered minerals. Consequently, synthetic diamonds, although chemically the same as natural diamonds, are not considered minerals.

Frederick K. Lutgens, *et al*., *Foundations of Earth Science*, 6th ed.

a. Argument, conclusion: When the term *mineral* is used ... considered minerals.
b. Argument, conclusion: A mineral is a naturally occurring inorganic solid.
c. Argument; conclusion: Synthetic diamonds ... are not considered minerals.
d. Argument, conclusion: It possesses a definite chemical structure ... properties.
e. Nonargument.

ANS: C PTS: 2

16. I was appalled to read that many communities are accommodating—or pandering to—the owners of sport utility vehicles by increasing the size of parking spaces. Apparently, officials in these cities just want to go with the flow, when they could be using parking-space politics to encourage the use of smaller, more fuel-efficient cars. When will Americans come to their senses and see the S.U.V. for what it is? It's an outsized extension of egotistical consumerism. I'm sick of being pushed around by the egotists in their Tahoes and Excursions who think nothing of misusing nonrenewable oil and gas reserves, as well as increasing pollution.

Jane F. Carlson, Letter to the Editor

a. Argument, conclusion: It's an outsized extension of egotistical consumerism.
b. Argument, conclusion: I was appalled to read ... the size of parking spaces.
c. Argument, conclusion: I'm sick of being pushed ... increasing pollution.
d. Nonargument.
e. Argument, conclusion: Apparently, officials ... more fuel-efficient cars.

ANS: D PTS: 2

17. Our attitudes and values inevitably affect how we act, and it is the same with politics. The functioning of political institutions at least partly reflects the attitudes, norms, and expectations of the citizenry. Thus the English use their constitutional institutions to sustain their liberty, while the same institutions were turned into instruments of repression in South Africa and Northern Ireland.

Gabriel Almond, *et al*., *Comparative Politics Today*, 7th ed.

a. Argument, conclusion: The same institutions were turned ... Northern Ireland.
b. Argument, conclusion: Our attitudes and values ... same with politics.
c. Argument, conclusion: The English use ... South Africa and Northern Ireland.
d. Argument, conclusion: The functioning of political institutions ... the citizenry.
e. Nonargument.

ANS: E PTS: 2

INSTRUCTIONS: The following problems relate to identifying and evaluating inductive and deductive arguments. Select the best answer for each.

18. Given that *n* is an integer, it follows that 2*n* is an even integer.
a. Inductive, strong.
b. Deductive, valid.
c. Deductive, sound.
d. Inductive, weak.
e. Deductive, invalid.

ANS: B PTS: 2

19. In professional boxing it is appropriate to throw knock-out punches. Since professional wrestling is similar in many ways to boxing, it is appropriate for professional wrestlers to throw knock-out punches.
a. Inductive, weak.
b. Deductive, valid.
c. Deductive, cogent.
d. Inductive, strong.
e. Deductive, invalid.

ANS: A PTS: 2

20. Most Hollywood stars have a criminal dark side. Look at Robert Blake. He killed his wife. And Winona Ryder ripped off stuff worth thousands of dollars from Saks Fifth Avenue.
a. Inductive, cogent.
b. Deductive, invalid.
c. Inductive, strong.
d. Inductive, weak.
e. Deductive, valid.

ANS: D PTS: 2

21. Mrs. Stevenson is a philanthropist. Therefore, she must give away a lot of money or property to what she considers worthy causes.
    a. Inductive, weak.
    b. Deductive, sound.
    c. Deductive, valid.
    d. Deductive, invalid.
    e. Inductive, strong.

    ANS: C PTS: 2

22. If people are not informed about the workings of government, then they cannot vote intelligently. People cannot vote intelligently. Therefore, people are not informed about the workings of government.
    a. Inductive, strong.
    b. Deductive, invalid.
    c. Inductive, sound.
    d. Deductive, valid.
    e. Inductive, weak.

    ANS: B PTS: 2

23. Each of the codefendants testified that the other defendant killed the victim. Therefore, we can only conclude that both defendants killed the victim.
    a. Deductive, unsound.
    b. Deductive, invalid.
    c. Deductive, valid.
    d. Inductive, weak.
    e. Inductive, strong.

    ANS: D PTS: 2

24. No supporters of abortion rights are fundamentalist Christians. Therefore, no fundamentalist Christians are supporters of abortion rights.
    a. Deductive, valid.
    b. Inductive, strong.
    c. Inductive, uncogent.
    d. Inductive, weak.
    e. Deductive, invalid.

    ANS: A PTS: 2

25. The highway sign says that the risk of forest fires in this area is extremely high right now. Therefore, we must conclude that the risk of forest fires is indeed high right now.
    a. Deductive, valid.
    b. Deductive, invalid.
    c. Inductive, cogent.
    d. Inductive, weak.
    e. Inductive, strong.

    ANS: E PTS: 2

26. Less than one percent of 38-year-old expectant mothers give birth to a Down syndrome baby. Therefore, since Pamela is a 38-year-old expectant mother, it is unlikely that she will give birth to a Down syndrome baby.
    a. Deductive, invalid.

b. Inductive, weak.
c. Deductive, valid.
d. Deductive, sound.
e. Inductive, strong.

ANS: E PTS: 2

27. All credit cards are invitations to overspend, and some invitations to overspent are precursors of bankruptcy. Therefore, some credit cards are precursors of bankruptcy.
a. Deductive, invalid.
b. Deductive, sound.
c. Inductive, strong.
d. Deductive, valid.
e. Inductive, weak.

ANS: A PTS: 2

28. DNA tests of blood found at the crime scene indicate a match with the defendant's blood. Therefore, the defendant must have been present at the crime scene.
a. Inductive, weak.
b. Inductive, strong.
c. Deductive, valid.
d. Deductive, invalid.
e. Inductive, cogent.

ANS: B PTS: 2

29. Sandra is older than Florence, and Florence is younger than Carl. Therefore, it necessarily follows that Sandra is older than Carl.
a. Inductive, strong.
b. Inductive, weak.
c. Deductive, invalid.
d. Inductive, uncogent.
e. Deductive, valid.

ANS: C PTS: 2

30. Given that $x - y = 13$ and $x = 18$. It follows that y = 4.
a. Inductive, strong.
b. Deductive, invalid.
c. Deductive, uncogent.
d. Inductive, weak.
e. Deductive, valid.

ANS: B PTS: 2

31. Today's edition of the *New York Times* ran a long article on the terrorist bombing in Israel. Therefore, probably the *Los Angeles Times*, which covers international news about as well as the *New York Times*, also has an article on that bombing.
a. Inductive, weak.
b. Deductive, valid.
c. Inductive, strong.
d. Inductive, cogent.
e. Deductive, invalid.

ANS: C PTS: 2

32. Either the painting is a forgery, or it's worth a small fortune. Therefore, the painting is worth a small fortune, since it's not a forgery.
    a. Deductive, valid.
    b. Deductive, invalid.
    c. Deductive, sound.
    d. Inductive, weak.
    e. Inductive, strong.

    ANS: A PTS: 2

33. The Director of the National Park Service stated in an interview that vegetation in the parks is seriously threatened by air pollution. Therefore, it must be the case that park vegetation is indeed threatened by air pollution, just as the Director says.
    a. Deductive, valid.
    b. Deductive, invalid.
    c. Inductive, weak.
    d. Inductive, uncogent.
    e. Inductive, strong.

    ANS: E PTS: 2

34. The bumper sticker says "Vote for Frank Jordan for Sheriff." The obvious conclusion is that Jordan is the best man for the job.
    a. Deductive, valid.
    b. Inductive, strong.
    c. Deductive, sound.
    d. Inductive, weak.
    e. Deductive, invalid.

    ANS: D PTS: 2

    INSTRUCTIONS: Select the correct answer for each multiple choice question.

35. Which of the following is a premise indicator?
    a. Whence.
    b. We may infer that.
    c. Implies that.
    d. Because
    e. Accordingly.

    ANS: D PTS: 2

36. Which of the following is a conclusion indicator?
    a. Given that.
    b. As.
    c. For the reason that.
    d. Owing to the fact that.
    e. As a result.

    ANS: E PTS: 2

37. Which of the following sentences is a statement?
    a. What is the density of gold?
    b. Look!

c. You failed the last test.
d. Stop playing and come in for dinner.
e. I recommend that you change the oil in your car.

ANS: C PTS: 2

38. Which of the following is a deductive argument?
a. An expository passage.
b. An argument from authority.
c. A causal inference.
d. A disjunctive syllogism.
e. A command.

ANS: D PTS: 2

39. Which of the following is an inductive argument?
a. An argument from analogy.
b. A categorical syllogism.
c. A consequent.
d. A piece of advice.
e. An argument from definition.

ANS: A PTS: 2

40. Which of the following is a necessary condition for cooking an egg?
a. Boiling it.
b. Raising its temperature.
c. Frying it.
d. Poaching it.
e. Breaking its shell.

ANS: B PTS: 2

41. Which of the following is a sufficient condition for being a bird?
a. Having a tail.
b. Being a canary.
c. Laying eggs.
d. Being able to fly.
e. Having a brain.

ANS: B PTS: 2

42. If a deductive argument has a false premise and a true conclusion, then we know:
a. It is sound.
b. It is strong.
c. It is valid.
d. It is invalid.
e. Nothing as such about its validity.

ANS: E PTS: 2

43. If a deductive argument has all true premises and a false conclusion, then we know:
a. It is invalid.
b. It is cogent.
c. It is valid.
d. It is sound.

e. It is weak.

ANS: A PTS: 2

44. In an explanation, the statement or statements that purport to do the explaining are called:
a. The explanandum.
b. The antecedent.
c. The explanans.
d. The consequent.
e. The premises.

ANS: C PTS: 2

PROBLEM

INSTRUCTIONS: The following problems relate to the counterexample method.

1. **PART A**
Some fettuccines are not taste sensations, for no low fat recipes are taste sensations, and some fettuccines are not low fat recipes.

The form of this argument is:

a. No L are T.
Some F are not T.
Some F are not L.

b. Some F are not T.
No L are T.
Some F are not L.

c. Some F are not T.
Some F are not L.
No L are T.

d. No L are T.
Some F are not L.
Some F are not T.

e. Some F are not L.
Some F are not T.
No L are T.

PART B
Which of the following substitutions proves the argument invalid?
a. F = animals, L = dogs, T = cats.
b. L = fish, T = mammals, F = cats.
c. T = fish, L = mammals, F = cats.
d. F = dogs, T = mammals, L = animals.
e. L = dogs, F = animals, T = fish.

ANS:
Part A: d
Part B: b

PTS: 4

2. **PART A**
If champagne contains alcohol, then minors should avoid it, so champagne contains alcohol, because minors should avoid it.

The form of this argument is:

a. If C then M.
M
C

b. If C then M.
C
M

c. M.
C
If C then M.

d. All C are M.
All A are M.
All C are A.

e. C are M.
M
C

PART B
Which of the following substitutions proves the argument invalid?
a. C = Napoleon was killed in a plane crash, M = Napoleon is alive.
b. C = cats, M = mammals.
c. C = Albert was killed in a car accident; M = Albert is dead.
d. C = cats, A = dogs, M = mammals.
e. C = Benjamin Franklin was killed in a plane crash; M = Benjamin Franklin is dead.

ANS:
Part A: a
Part B: e

PTS: 4

3. **PART A**
If auditors botch their job, then investors are misled. Hence, if investors are misled, then public confidence is eroded, because if auditors botch their job, then public confidence is eroded.

The form of this argument is:
a. If I then P.
If A then P.
If A then I.

b. If A then I.
If I then P.
If A then P.

c. If A then I.
If A then P.
If I then P.

d. All A are P.
All A are I.
All I are P.

e. No A are I.
No I are P.
No A are P.

PART B
Which of the following substitutions proves the argument invalid?
a. A = Jennifer Aniston is a lawyer; I = Jennifer Aniston is a human; P = Jennifer Aniston can represent clients in court.
b. A = Bruce Willis is an actor, I = Bruce Willis is well known, P = Bruce Willis is a human.
c. A = cats, P = mammals, I = animals.
d. A = dogs, I = fish, P = mammals.
e. A = candy is sweet, I = lemons are sour, P = sea water is salty.

ANS:
Part A: c
Part B: a

PTS: 4

Chapter 2 Test A

MULTIPLE CHOICE

1. Which of the following statements has primarily cognitive meaning?
   a. Private insurance companies regularly overbill the Medicare program.
   b. From what I saw last night, it's clear that your little brother is a brat.
   c. Justin Timberlake's latest CD is positively stunning.
   d. Professor Gibson delivered a moronic lecture today on Plato's metaphysics.
   e. Everyone with a functioning brain rejects religious fundamentalism.

   ANS: A PTS: 2

2. Which of the following statements expresses a value claim?
   a. Animal rights groups argue that live animals should not be used as mascots.
   b. The recent jobs report raised fears of a recession among Wall Street investors.
   c. Piracy continues to be a drag on the motion picture industry.
   d. The *Los Angeles Times* is a better paper than the *San Francisco Chronicle*.
   e. Diabetes poses a serious threat to the health of the elderly.

   ANS: D PTS: 2

3. Which of the following statements is vague?
   a. Tahiti is located in French Polynesia.
   b. American workers are more productive than the workers in any other country.
   c. Art work at the Genesis gallery tends to be expensive.
   d. Mabel shot her husband while taking a bath.
   e. Polar bears are threatened by global warming.

   ANS: C PTS: 2

4. Which of the following statements is ambiguous?
   a. Anniversaries are usually occasions for celebration.
   b. Homes in the new River Front development are reasonably priced.
   c. The Thanksgiving holiday always occurs in November.
   d. Boalt Hall is part of the University of California.
   e. Professor Hays talked about sex in the seminar room.

   ANS: E PTS: 2

5. The following dispute:

   Jane: Professor Barker said he spent the entire day teaching. He must be exhausted.
   Ken: That's impossible. Professor Barker's students are incapable of learning, and if there's no learning, then there's no teaching.

   is best described as:
   a. Factual.
   b. Verbal arising from ambiguity.
   c. Legal.
   d. Fundamental.
   e. Verbal arising from vagueness.

   ANS: B PTS: 2

6. The following dispute:

Bill: Finally our football team seems to be on track. They beat their opponents last night by 14 points.
Greg: That's not right. They beat them by only 10 points.

is best described as:
a. Verbal arising from vagueness.
b. Emotional.
c. Verbal arising from ambiguity.
d. Factual.
e. Dispositional.

ANS: D PTS: 2

7. Which of the following words is a term?
a. Opportunity.
b. Again.
c. Beyond the horizon.
d. Everywhere but here.
e. Sloppily reasoned.

ANS: A PTS: 2

8. Which of the following are all denoted by the term "Coin"?
a. Round, metallic, shiny, valuable.
b. American, Canadian, French, German.
c. Dime, nickel, quarter, penny.
d. Gold, silver, copper, zinc.
e. Government, nation, figurehead,

ANS: C PTS: 2

9. Which of the following are all connoted by the term "actress"?
a. Television, radio, stage, screen.
b. Empathic, talented, intuitive, perceptive.
c. Nicole Kidman, Helen Hunt, Christina Aguilera, Angelina Jolie.
d. Drama, comedy, documentary, horror.
e. Wealthy, popular, admired, followed.

ANS: B PTS: 2

10. Which of the following terms have the same extension?
a. Tiger Woods, Peyton Manning.
b. Offensive player, defensive player.
c. Edgar Allen Poe, author of the *Iliad*.
d. Pitcher, catcher.
e. Tooth fairy, leprechaun.

ANS: E PTS: 2

11. Which of the following groups of terms is in the order of decreasing extension?
a. Carbonated soft drink, drink, soft drink Pepsi.
b. Soft drink, carbonated soft drink, Pepsi, drink.

c. Pepsi, carbonated soft drink, soft drink, drink.
d. Drink, soft drink, carbonated soft drink, Pepsi.
e. Pepsi, drink, carbonated soft drink, soft drink.

ANS: D PTS: 2

12. Which of the following groups of terms is in the order of decreasing intension?
a. Magazine, news magazine, *Newsweek*, publication.
b. Publication, magazine, news magazine, *Newsweek*.
c. *Newsweek*, news magazine, magazine, publication.
d. News magazine, *Newsweek*, publication, magazine.
e. News magazine, publication, magazine, *Newsweek*.

ANS: C PTS: 2

13. Which of the following are both intensional definitions?
a. Etymological, definition by genus and difference.
b. Synonymous definition, demonstrative definition.
c. Definition by genus and difference, enumerative definition.
d. Demonstrative definition, definition by subclass.
e. Ostensive definition, etymological definition.

ANS: A PTS: 2

14. Which of the following are both extensional definitions?
a. Ostensive definition, definition by genus and difference.
b. Definition by subclass, enumerative definition.
c. Operational definition, synonymous definition.
d. Demonstrative definition, definition by genus and difference.
e. Etymological definition, definition by subclass.

ANS: B PTS: 2

15. In the definition "'Channel' means a navigable route between two bodies of water" the definiens is:
a. Between two bodies of water.
b. Route.
c. Channel.
d. Navigable.
e. Navigable route between two bodies of water.

ANS: E PTS: 2

16. In the definition "'Ghost' means the soul of a dead person" the definiendum is:
a. Ghost.
b. Dead.
c. Soul.
d. Person.
e. Soul of a dead person.

ANS: A PTS: 2

17. The definition "'Contract' means an agreement enforceable by law" is an example of:
a. A precising definition.
b. A theoretical definition.
c. A definition by genus and difference.
d. A definition by subclass.

e. An etymological definition.

ANS: C PTS: 2

18. The definition "'Rest' means (1) the repose of sleep, (2) an interval of silence between notes, (3) a period of inactivity" is an example of:
a. A theoretical definition.
b. A lexical definition.
c. A precising definition.
d. A stipulative definition.
e. An enumerative definition.

ANS: B PTS: 2

19. The definition "'Foxhead' means a person whose head is filled with misinformation from listening to Fox News" is an example of:
a. An enumerative definition.
b. A synonymous definition.
c. A lexical definition.
d. A stipulative definition.
e. A precising definition.

ANS: D PTS: 2

20. The definition "'Blogger' means an egocentric individual who wastes inordinate amounts of time writing nonsense opinions on websites that nobody reads" is an example of:
a. An operational definition.
b. A precising definition.
c. A theoretical definition.
d. A hypertextual definition.
e. A persuasive definition.

ANS: E PTS: 2

21. The definition "'Game bird' means a duck, pheasant, goose, quail, and the like" is an example of:
a. A demonstrative definition.
b. An enumerative definition.
c. A persuasive definition.
d. A definition by subclass.
e. A precising definition.

ANS: D PTS: 2

22. The definition "An object is 'spherical' if and only if it rolls freely in any direction when placed on a flat surface" is an example of:
a. A definition by genus and difference.
b. An operational definition.
c. A lexical definition.
d. A definition by subclass.
e. A stipulative definition.

ANS: B PTS: 2

23. The definition "'Quarterback' means someone such as Peyton Manning, Philip Rivers, and Drew Brees" is an example of:
a. A definition by subclass.

b. An operational definition.
c. An enumerative definition.
d. A demonstrative definition.
e. A stipulative definition.

ANS: C PTS: 2

24. The definition "'Juvenile' means, for purposes of New York law, a person under 16 years of age" is an example of:
a. A precising definition.
b. An operational definition.
c. A synonymous definition.
d. A jurisdictional definition.
e. An etymological definition.

ANS: A PTS: 2

25. The definition "'Demolish' means destroy" is an example of:
a. A demonstrative definition.
b. A theoretical definition.
c. A definition by genus and difference.
d. A synonymous definition.
e. A precising definition.

ANS: D PTS: 2

26. The definition "'Neurosis' means a conflict between conscious and unconscious forces or complexes" is an example of:
a. A definition by genus and difference.
b. An extensional definition.
c. A theoretical definition.
d. A psychological definition.
e. A persuasive definition.

ANS: C PTS: 2

27. The definition "'Cup' means *that* and *that* and *that*" (as you point to a number of cups) is an example of:
a. A lexical definition.
b. A demonstrative definition.
c. A definition by subclass.
d. An enumerative definition.
e. A precising definition.

ANS: B PTS: 2

28. The definition "'Radical' is a word derived from the Latin word *radix* which means root" is an example of:
a. An etymological definition.
b. A stipulative definition.
c. A synonymous definition.
d. An operational definition.
e. An ostensive definition.

ANS: A PTS: 2

29. In the definition "'Trunk' means a large sturdy box for holding clothes or personal effects" the genus term is:
    a. Clothes or personal effects.
    b. Trunk.
    c. Box.
    d. A large sturdy box for holding clothes or personal effects.
    e. A large sturdy box.

    ANS: C PTS: 2

30. In the definition "'Stage' means a platform on which actors perform in a theater" the species term is:
    a. A platform on which actors perform in a theater.
    b. Platform.
    c. Actors.
    d. Theater.
    e. Stage.

    ANS: E PTS: 2

31. In the definition "'Temple' means an edifice dedicated to the worship of a deity" the difference word(s) is/are:
    a. Worship of a deity.
    b. Deity.
    c. Temple.
    d. Dedicated to the worship of a deity.
    e. Edifice.

    ANS: D PTS: 2

32. As a lexical definition, the definition "'Shoe' means an article made of leather for wearing on one's foot" may be criticized as:
    a. Being ambiguous.
    b. Being too narrow.
    c. Being too broad.
    d. Being negative.
    e. Being figurative.

    ANS: B PTS: 2

33. As a lexical definition, the definition "'Chewing gum' means gum for chewing" may be criticized as:
    a. Being obscure.
    b. Being figurative.
    c. Being circular.
    d. Being affective.
    e. Being vague.

    ANS: C PTS: 2

34. As a lexical definition, the definition "'Vacuum cleaner' means a motorized atmospheric pressure gradient creator intended for particulate matter removal" may be criticized as:
    a. Being obscure.
    b. Failing to indicate the context to which the definiens pertains.
    c. Being affective.
    d. Being circular.
    e. Being affective.

ANS: A PTS: 2

35. As a lexical definition, the definition "'Possible' means anything that is not impossible" may be criticized as:
    a. Being too narrow.
    b. Being too broad.
    c. Being figurative.
    d. Failing to convey the essential meaning of the word being defined.
    e. Being negative.

    ANS: E PTS: 2

36. As a lexical definition, Mark Twain's definition "'Banker' means a fellow who lends you his umbrella when the sun is shining and wants it back the minute it begins to rain" may be criticized as:
    a. Being ambiguous.
    b. Being obscure.
    c. Being negative.
    d. Being figurative.
    e. Being circular.

    ANS: D PTS: 2

37. As a lexical definition, Emma Goldman's definition "Patriotism: A superstition artificially created and maintained through a network of lies and falsehoods" may be criticized as:
    a. Being negative.
    b. Being too narrow.
    c. Being affective.
    d. Being figurative.
    e. Being too broad.

    ANS: C PTS: 2

38. As a lexical definition, the definition "'Traffic light' means a red, green, or yellow light found on street and highway intersections" may be criticized as:
    a. Being obscure.
    b. Being too broad.
    c. Failing to indicate the context to which the definiens pertains.
    d. Being too narrow.
    e. Failing to convey the essential meaning of the word being defined.

    ANS: E PTS: 2

39. As a lexical definition, the definition "'Expensive' means costing a lot" may be criticized as:
    a. Being vague.
    b. Being affective.
    c. Being ambiguous.
    d. Failing to indicate the context to which the definiens pertains.
    e. Being circular.

    ANS: A PTS: 2

40. As a lexical definition, the definition "'Trumpet' means a brass musical instrument" may be criticized as:
    a. Being obscure.
    b. Being too broad.

c. Being too narrow.
d. Being vague.
e. Being ambiguous.

ANS: B PTS: 2

Chapter 2 Test B

MULTIPLE CHOICE

1. Which of the following statements has primarily cognitive meaning?
   a. Rowen Atkins' latest film is irresistibly charming.
   b. Flash drives allow data to be transferred from one computer to another.
   c. Vera Wang released an outlandish collection in Milan last week.
   d. Your brother's position on euthanasia is ridiculous, to say the least.
   e. The state senate's current session has been a disaster up till now.

   ANS: B PTS: 2

2. Which of the following statements expresses a value claim?
   a. Military veterans often suffer from psychological traumas.
   b. Performance-enhancing drugs continue to plague professional baseball.
   c. With global warming, hurricanes in the Caribbean are expected to worsen.
   d. As a general rule, a patent goes to the first person to file an application.
   e. Let's face it; torture is wrong no matter how you look at it.

   ANS: E PTS: 2

3. Which of the following statements is vague?
   a. Frank seems a little off these days.
   b. Platinum is more expensive, ounce for ounce, than gold.
   c. The assailant struck a lumberjack with an ax.
   d. All of today's cell phones contain microchips.
   e. Sixty million Americans suffer from insomnia.

   ANS: A PTS: 2

4. Which of the following statements is ambiguous?
   a. Organic foods are increasing in popularity.
   b. Diabetes is detected by testing blood glucose levels.
   c. The stolen painting was found by a tree.
   d. Surfing is impossible if there are no waves.
   e. Justine earns a high salary at her new job.

   ANS: C PTS: 2

5. The following dispute:

   Harry: I see that the Zena Corporation is really doing well now. It earned $1.4 million last quarter.
   Piper: No, you're quite wrong about that. In fact Zena earned only $1.2 million last quarter.

   is best described as:
   a. Verbal arising from vagueness.
   b. Moral.
   c. Verbal arising from ambiguity.
   d. Factual.
   e. Financial.

ANS: D PTS: 2

6. The following dispute:

   Cindy: I have it on good authority that you lifted your term paper from the Internet. I'm afraid you're guilty of plagiarism.
   Dave: That's not plagiarism. It's true that the original paper came from the Internet, but I changed many of the words before I handed it in.

   is best described as:
   a. Verbal arising from vagueness.
   b. Academic.
   c. Verbal arising from ambiguity.
   d. Moral.
   e. Factual.

   ANS: A PTS: 2

7. Which of the following words is a term?
   a. Expressly.
   b. Gifted.
   c. Because.
   d. On the wall.
   e. Best player on the team.

   ANS: E PTS: 2

8. Which of the following are all denoted by the term "sport"?
   a. Gridiron, diamond, court, course.
   b. Football, baseball, tennis, golf.
   c. Competitive, physical, athletic, recreational.
   d. Tiger Woods, Serena Williams, Tom Brady, Alex Rodriguez.
   e. Wealthy, popular, admired, celebrity.

   ANS: B PTS: 2

9. Which of the following are all connoted by the term "news anchor"?
   a. Microphone, camera, television, radio.
   b. Katie Couric, Diane Sawyer, Brian Williams, Jim Lehrer.
   c. Informed, articulate, good looking, well dressed.
   d. NBC, CBS, ABC, PBS.
   e. Report, predict, speculate, analyze.

   ANS: C PTS: 2

10. Which of the following pairs of terms have the same extension?
    a. Lexus, Infinity.
    b. New York, Los Angeles.
    c. Yard, meter.
    d. Wolf, wolf weighing less than two thousand pounds.
    e. Tallest mountain on earth, tallest mountain on Mars.

    ANS: D PTS: 2

11. Which of the following groups of terms are in the order of decreasing intension?

a. Wineglass, glass, drinking vessel, vessel.
b. Vessel, drinking vessel, glass, wineglass.
c. Drinking vessel, wineglass, glass, vessel.
d. Glass, wineglass, vessel, drinking vessel.
e. Drinking vessel, wineglass, vessel, glass.

ANS: A PTS: 2

12. Which of the following groups of terms are in the order of decreasing extension?
a. Deciduous tree, tree, maple, plant.
b. Plant, tree, deciduous tree, maple.
c. Tree, deciduous tree, maple, plant.
d. Deciduous tree, maple, plant, tree.
e. Maple, deciduous tree, tree, plant.

ANS: B PTS: 2

13. Which of the following are both intensional definitions?
a. Definition by genus and difference, enumerative definition.
b. Definition by genus and difference, definition by subclass.
c. Etymological definition, ostensive definition.
d. Demonstrative definition, synonymous definition.
e. Etymological definition, synonymous definition.

ANS: E PTS: 2

14. Which of the following are both extensional definitions?
a. Etymological definition, enumerative definition.
b. Operational definition, definition by subclass.
c. Definition by genus and difference, synonymous definition.
d. Definition by subclass, demonstrative definition.
e. Demonstrative definition, Operational definition,.

ANS: D PTS: 2

15. In the definition "'Hammer' means a tool used for driving nails" the definiens is:
a. Hammer.
b. Tool.
c. A tool used for driving nails.
d. Nails.
e. Used for driving nails.

ANS: C PTS: 2

16. In the definition "'Mission' means a specific task that a person is sent to perform" the definiendum is:
a. A specific task that a person is sent to perform.
b. Mission.
c. Task.
d. Person.
e. Sent to perform.

ANS: B PTS: 2

17. The definition "'Rat' means (1) a long-tailed rodent, (2) a scoundrel, (3) an informer" is an example of:
a. A biological definition.
b. An operational definition.

c. A lexical definition.
d. A stipulative definition.
e. A theoretical definition.

ANS: C PTS: 2

18. The definition "'Lamp' means *that* and *that* and *that*" (as you point to a number of lamps) is an example of:
a. An enumerative definition.
b. A precising definition.
c. A definition by subclass.
d. An operational definition.
e. A demonstrative definition.

ANS: E PTS: 2

19. The definition "'Pantheism' is a word derived from the Greek words *pan*, meaning all, and *theos*, meaning god" is an example of:
a. An etymological definition.
b. A religious definition.
c. An extensional definition.
d. A definition by genus and difference.
e. A stipulative definition.

ANS: A PTS: 2

20. The definition "'Physicist' means someone such as Stephen Hawking, Albert Einstein, or Werner Heisenberg" is an example of:
a. A synonymous definition.
b. A definition by genus and difference.
c. A definition by subclass.
d. An enumerative definition.
e. A scientific definition.

ANS: D PTS: 2

21. The definition "'Key' means an instrument cut to open a lock" is an example of:
a. A synonymous definition.
b. A definition by genus and difference.
c. A stipulative definition.
d. A definition by subclass.
e. A precising definition.

ANS: B PTS: 2

22. The definition "'Roam' means wander" is an example of:
a. A legal definition.
b. An ostensive definition.
c. A synonymous definition.
d. An etymological definition.
e. A precising definition.

ANS: C PTS: 2

23. The definition "'Weed' means dandelion, goldenrod, milk thistle, poison ivy, and so on" is an example of:

a. A synonymous definition.
b. A definition by genus and difference.
c. An enumerative definition.
d. A demonstrative definition.
e. A definition by subclass.

ANS: E PTS: 2

24. The definition "'Vegan' means a morally conscientious individual who is sensitive to the suffering of animals and who, as a result, refuses to eat them" is an example of:
a. A persuasive definition.
b. A stipulative definition.
c. A theoretical definition.
d. A lexical definition.
e. A moral definition.

ANS: A PTS: 2

25. The definition "An investor is 'accredited,' for SEC purposes, if and only if he/she has a net worth of at least $1 million or an income of $200,000" is an example of:
a. An operational definition.
b. A lexical definition.
c. A financial definition.
d. A definition by genus and difference.
e. A precising definition.

ANS: E PTS: 2

26. The definition "A basketball is 'properly inflated' if and only if it rebounds to 60% of the height from which it is dropped" is an example of:
a. A persuasive definition.
b. A pneumatic definition.
c. A demonstrative definition.
d. An operational definition.
e. A theoretical definition.

ANS: D PTS: 2

27. The definition "'Water' means a molecule composed of two hydrogen atoms bonded to one oxygen atom" is an example of:
a. A demonstrative definition.
b. A theoretical definition.
c. A persuasive definition.
d. A chemical definition.
e. An operational definition.

ANS: B PTS: 2

28. The definition "'Cloyster' means a shellfish that results from crossbreeding a clam with an oyster" is an example of:
a. A lexical definition.
b. A demonstrative definition.
c. A stipulative definition.
d. A biological definition.
e. An operational definition.

ANS: C PTS: 2

29. In the definition "'Squire' means a young man of noble birth who serves a knight" the genus term is:
    a. Knight.
    b. Squire.
    c. Young.
    d. Man.
    e. A young man of noble birth who serves a knight.

    ANS: D PTS: 2

30. In the definition "'Task' means a piece of work assigned to a person." the species term is:
    a. Piece.
    b. Work.
    c. Person.
    d. A piece of work assigned to a person.
    e. Task.

    ANS: E PTS: 2

31. In the definition "'Faucet' means a device intended to control the flow of a liquid" the difference word(s) is/are:
    a. Intended to control the flow of a liquid.
    b. Device.
    c. Flow of a liquid.
    d. Liquid.
    e. Faucet.

    ANS: A PTS: 2

32. As a lexical definition, "'Feminism' means a socialist antifamily movement created by ugly women to rob men of their natural entitlements" may be criticized as:
    a. Being figurative.
    b. Being too narrow.
    c. Being affective.
    d. Being negative.
    e. Being too broad.

    ANS: C PTS: 2

33. As a lexical definition, the definition "'Refrigerator' means a compartment having one or two doors intended for storing food" may be criticized as:
    a. Being figurative.
    b. Failing to convey the essential meaning of the word being defined.
    c. Being vague.
    d. Being ambiguous.
    e. Failing to indicate the context to which the definiens pertains.

    ANS: B PTS: 2

34. As a lexical definition, the definition "'Keyboard' means a board with keys" may be criticized as:
    a. Being ambiguous.
    b. Failing to indicate the context to which the definiens pertains.
    c. Being too broad.
    d. Being circular.

e. Being vague.

ANS: D PTS: 2

35. As a lexical definition, the definition "'Pneumonia' means a disease of the lungs" may be criticized as:
a. Being ambiguous.
b. Being too narrow.
c. Being too broad.
d. Being affective.
e. Being obscure.

ANS: C PTS: 2

36. As a lexical definition, "'Healthy' means feeling good" may be criticized as:
a. Being vague.
b. Being circular.
c. Being ambiguous.
d. Being figurative.
e. Being negative.

ANS: A PTS: 2

37. As a lexical definition, Kahlil Gibran's definition of 'poet' as "A bird of unearthly excellence who escapes from his celestial realm and arrives in this world warbling" may be criticized as:
a. Being too narrow.
b. Being figurative.
c. Being obscure.
d. Being too broad.
e. Being negative.

ANS: B PTS: 2

38. As a lexical definition, the definition "'Practical' means not being impractical" may be criticized as:
a. Being vague.
b. Being too broad.
c. Failing to indicate the context to which the definiens pertains.
d. Being too narrow.
e. Being negative.

ANS: E PTS: 2

39. As a lexical definition, the definition "'Chip' means a softly sliced return shot with heavy backspin" may be criticized as:
a. Being ambiguous.
b. Being vague.
c. Being too broad.
d. Failing to indicate the context to which the definiens pertains.
e. Being too narrow.

ANS: D PTS: 2

40. As a lexical definition, the definition "'Lawyer' means a man licensed to practice law" may be criticized as:
a. Being obscure.
b. Being affective.
c. Being too broad.

d. Being circular.
e. Being too narrow.

ANS: E PTS: 2

Chapter 2 Test C

MULTIPLE CHOICE

1. Which of the following statements has primarily cognitive meaning?
   a. Francesca Davis gave a thrilling rendition of Mimi in *La Boheme* last week.
   b. Craig's performance in Arthur Miller's *The Crucible* was mesmerizing.
   c. The quarterback looked like a complete buffoon in yesterday's game.
   d. Hume claims that ethical decisions are grounded in our emotions.
   e. The role of the police officer, played by Richard Gere, is riveting.

   ANS: D PTS: 2

2. Which of the following statements expresses a value claim?
   a. Most art museums are reluctant to purchase the work of young artists.
   b. The diagnosis of bipolar disorder among adolescents has risen in recent years.
   c. Dog fighting is a thoroughly disgusting line of business.
   d. When interest rates rise, the number of real estate foreclosures tends to increase.
   e. Mountaintop removal of coal causes tremendous erosion and soil runoff.

   ANS: C PTS: 2

3. Which of the following statements is vague?
   a. Surgery is sometimes needed to relieve a pinched nerve.
   b. Professor Jackson's algebra class is easy.
   c. The driver struck the pedestrian while talking on a cell phone.
   d. Herringbone jackets are always in fashion.
   e. Tag Heuer watches are made in Switzerland.

   ANS: B PTS: 2

4. Which of the following statements is ambiguous?
   a. The hunter shot a deer standing in the meadow.
   b. Investing decisions should never be based on fear.
   c. The new student in the class is quite tall.
   d. A shadow industry of scammers preys upon aspiring writers.
   e. The nursing profession has good prospects for job growth.

   ANS: A PTS: 2

5. The following dispute:

   Kent: I see that your friend is back playing tennis. I heard him tell you that he had a match.
   Laura: You couldn't be more wrong. I asked him if he could light my cigarette, and he said he had a match.

   is best described as:
   a. Confused.
   b. Verbal, arising from ambiguity.
   c. Verbal arising from vagueness.
   d. Factual.
   e. Irresolvable.

ANS: B PTS: 2

6. The following dispute:

   Judy: Whatever you do, never move to Chicago. It's extremely cold there in the winter.
   Clyde: You call that cold? Compared with Barrow, Alaska, Chicago is positively balmy in the winter.

   is best described as:
   a. Geographical.
   b. Verbal arising from ambiguity.
   c. Friendly.
   d. Factual.
   e. Verbal arising from vagueness.

   ANS: E PTS: 2

7. Which of the following words is a term?
   a. Around the Moon.
   b. Extremely interesting.
   c. In the garage.
   d. Helen Hunt.
   e. Beyond the call of duty.

   ANS: D PTS: 2

8. Which of the following are all denoted by the term "camera maker"?
   a. Japanese, German, American, Chinese.
   b. Nikon, Canon, Olympus, Sony.
   c. Optical, electronic, sophisticated, hand-held.
   d. Manufacturer, corporation, business, marketer.
   e. Lens, shutter, film, develop.

   ANS: B PTS: 2

9. Which of the following are all connoted by the term "tennis player"?
   a. Wealthy, cosmopolitan, multilingual, charming.
   b. Venus Williams, Justine Henin, Roger Federer, Rafael Nadal.
   c. Swiss, Belgian, Spanish, American.
   d. Female, male, person, athlete.
   e. Fast, agile, strong, alert.

   ANS: E PTS: 2

10. Which of the following pairs of terms have the same extension?
    a. Author of the *Scarlet Letter*, Nathaniel Hawthorne.
    b. Cat, mouse.
    c. Bill Clinton, Al Gore.
    d. Peyton Manning, quarterback.
    e. Teacher, student.

    ANS: A PTS: 2

11. Which of the following groups of terms are in the order of increasing intension?
    a. Pickup, two-axel truck, truck, vehicle.

b. Two-axel truck, truck, pickup, vehicle.
c. Vehicle, truck, two-axle truck, pickup.
d. Truck, pickup, vehicle, two-axel truck.
e. Vehicle, pickup, truck, two-axel truck.

ANS: C PTS: 2

12. Which of the following groups of terms is in the order of increasing extension?
a. Poodle, toy poodle, mammal, dog.
b. Toy poodle, poodle, dog, mammal.
c. Mammal, dog, poodle, toy poodle.
d. Toy poodle, dog, mammal, poodle.
e. Dog, toy poodle, mammal, poodle.

ANS: B PTS: 2

13. Which of the following are both intensional definitions?
a. Operational definition, definition by genus and difference.
b. Definition by genus and difference, enumerative definition.
c. Demonstrative definition, definition by subclass.
d. Synonymous definition, demonstrative definition.
e. Ostensive definition, synonymous definition.

ANS: A PTS: 2

14. Which of the following are both extensional definitions?
a. Definition by subclass, synonymous definition.
b. Operational definition, definition by subclass.
c. Etymological definition, synonymous definition,
d. Demonstrative definition, enumerative definition.
e. Definition by genus and difference, ostensive definition.

ANS: D PTS: 2

15. In the definition "'Pickle' means a cucumber that has been preserved and flavored in brine or vinegar" the definiens is:
a. A cucumber that has been preserved and flavored in brine or vinegar.
b. Pickle.
c. Brine or vinegar.
d. Cucumber.
e. Preserved and flavored.

ANS: A PTS: 2

16. In the definition "'Ray' means a narrow beam of light" the definiendum is:
a. Beam.
b. Ray.
c. Light.
d. Beam of light.
e. A narrow beam of light.

ANS: B PTS: 2

17. The definition "A ticket purchaser is a 'senior' if and only if he/she is at least 55 years old" is an example of:
a. A theoretical definition.

b. An operational definition.
c. An automotive definition.
d. A definition by genus and difference.
e. A precising definition.

ANS: E PTS: 2

18. The definition "'Fault' means flaw" is an example of:
a. A definition by genus and difference.
b. A persuasive definition.
c. A synonymous definition.
d. An operational definition.
e. An extensional definition.

ANS: C PTS: 2

19. The definition "'Religion' means an institutionalized belief in fairy tales that undermines our capacity to reason" is an example of:
a. A demonstrative definition.
b. A precising definition.
c. A lexical definition.
d. An operational definition.
e. A persuasive definition.

ANS: E PTS: 2

20. The definition "'Pillow' means *that* and *that* and *that*" (as you point to a number of pillows) is an example of:
a. A precising definition.
b. An etymological definition.
c. A lexical definition.
d. A demonstrative definition.
e. A definition by genus and difference.

ANS: D PTS: 2

21. The definition "'Viddict' means a person addicted to video games" is an example of:
a. A lexical definition.
b. A stipulative definition.
c. A theoretical definition.
d. A technological definition.
e. An etymological definition.

ANS: B PTS: 2

22. The definition "'Gold' means an element composed of 79 protons, 118 neutrons, and 79 electrons" is an example of:
a. An operational definition.
b. A definition by subclass.
c. A physiological definition.
d. A theoretical definition.
e. An ostensive definition.

ANS: D PTS: 2

23. The definition "'Precedent' is a word derived from the Latin word *praecedere* meaning to come before" is an example of:
    a. An etymological definition.
    b. A precising definition.
    c. A definition by genus and difference.
    d. A legal definition.
    e. A theoretical definition.

    ANS: A PTS: 2

24. The definition "'Mine' means (1) an excavation in the earth, (2) an explosive device, (3) an abundant source" is an example of:
    a. A synonymous definition.
    b. A demonstrative definition.
    c. A geological definition.
    d. A persuasive definition.
    e. A lexical definition.

    ANS: E PTS: 2

25. The definition "'Rapper' means someone such as 50 Cent, Eminem, Usher, or Akon" is an example of:
    a. A definition by subclass.
    b. A demonstrative definition.
    c. An enumerative definition.
    d. A precising definition.
    e. A musical definition.

    ANS: C PTS: 2

26. The definition "'Watch' means a small portable timepiece" is an example of:
    a. A synonymous definition.
    b. A definition by genus and difference.
    c. A stipulative definition.
    d. A demonstrative definition.
    e. An enumerative definition.

    ANS: B PTS: 2

27. The definition "'Bird' means a robin, sparrow, finch, swallow, crow, and so on" is an example of:
    a. A demonstrative definition.
    b. An ornithological definition.
    c. A definition by subclass.
    d. A stipulative definition.
    e. An enumerative definition.

    ANS: C PTS: 2

28. The definition "Salmon is 'cooked' if and only if it flakes when pulled apart" is an example of:
    a. An operational definition.
    b. A persuasive definition.
    c. A precising definition.
    d. A culinary definition.
    e. A theoretical definition.

    ANS: A PTS: 2

29. In the definition "'Truck' means a large vehicle for carrying goods" the genus term is:
    a. Large vehicle for carrying goods
    b. Large vehicle.
    c. Truck.
    d. Vehicle.
    e. Goods

    ANS: D PTS: 2

30. In the definition "'Cloth' means a fabric made by weaving or knitting" the species term is:
    a. Weaving.
    b. Fabric.
    c. Weaving or knitting.
    d. Fabric made by weaving or knitting
    e. Cloth.

    ANS: E PTS: 2

31. In the definition "'Suitor' means a man who courts or woos a woman" the difference word(s) is/are:
    a. Suitor.
    b. Who courts or woos a woman.
    c. Woman.
    d. Man.
    e. Courts.

    ANS: B PTS: 2

32. As a lexical definition, the definition "'Fireplace' means a place for fire" may be criticized as:
    a. Being affective.
    b. Failing to indicate the context to which the definiens pertains.
    c. Negative.
    d. Being circular.
    e. Failing to convey the essential meaning of the word being defined.

    ANS: D PTS: 2

33. As a lexical definition, the definition "'Ring' means a circular band of gold worn on the finger as an ornament" may be criticized as:
    a. Being too broad.
    b. Being vague.
    c. Being too narrow.
    d. Being circular.
    e. Failing to indicate the context to which the definiens pertains.

    ANS: C PTS: 2

34. As a lexical definition, the definition "'Personal' means not being impersonal" may be criticized as:
    a. Being figurative.
    b. Being vague.
    c. Being affective.
    d. Being negative.
    e. Failing to convey the essential meaning of the word being defined.

    ANS: D PTS: 2

35. As a lexical definition, the definition "'Credit card' means a wallet-sized piece of plastic embossed with several numerals and containing a magnetic strip" may be criticized as:
    a. Failing to convey the essential meaning of the word being defined.
    b. Being ambiguous.
    c. Being obscure.
    d. Failing to indicate the context to which the definiens pertains.
    e. Being affective.

    ANS: A PTS: 2

36. As a lexical definition, the definition "'Supernatural' means whatever you don't normally expect" may be criticized as:
    a. Being too narrow.
    b. Being vague.
    c. Being ambiguous.
    d. Being circular.
    e. Being ambiguous.

    ANS: B PTS: 2

37. As a lexical definition, the definition "'Elm' means a deciduous tree" may be criticized as:
    a. Being figurative.
    b. Being circular.
    c. Being too narrow.
    d. Being ambiguous.
    e. Being too broad.

    ANS: E PTS: 2

38. As a lexical definition, Bill Cosby's definition "'Human' means the only creature on earth that allows its children to come back home" may be criticized as:
    a. Being too broad.
    b. Being circular.
    c. Being figurative.
    d. Being negative.
    e. Being too narrow.

    ANS: C PTS: 2

39. As a lexical definition, Ambrose Bierce's definition "Love: A temporary insanity curable by marriage" may be criticized as:
    a. Being ambiguous.
    b. Being obscure.
    c. Being negative.
    d. Failing to indicate the context to which the definiens pertains.
    e. Being affective.

    ANS: E PTS: 2

40. As a lexical definition, the definition "'Flag' means a two dimensional piece of vexillogical material displayed for symbolic purposes" may be criticized as:
    a. Being too broad.
    b. Being too narrow.
    c. Being vague.
    d. Being obscure.

e. Being negative.

ANS: D PTS: 2

Chapter 2 Test D

MULTIPLE CHOICE

1. Which of the following statements has primarily cognitive meaning?
   a. John Grisham's latest novel is fascinating.
   b. Some of Frank Lloyd Wright's buildings are thoroughly ugly.
   c. Rainforest destruction in Brazil will alter that country's climate.
   d. I was disgusted by today's action in the Senate.
   e. Every item on the menu in this restaurant is delicious.

   ANS: C PTS: 2

2. Which of the following statements expresses a value claim?
   a. Dropping the atomic bomb on Hiroshima killed over 100,000 people.
   b. Jobs at Home Depot pay more than jobs at McDonald's.
   c. Abortion is considered a sin by the Catholic Church.
   d. Ted Kennedy is regarded as a liberal by most voters.
   e. Today's fashions are positively awful.

   ANS: E PTS: 2

3. Which of the following statements is vague?
   a. The convicted prostitutes appealed to the governor.
   b. Terry bought a new widescreen TV.
   c. Sporting events are broadcast on satellite radio.
   d. All of the paintings in this gallery are expensive.
   e. The most venomous snake is native to Australia.

   ANS: D PTS: 2

4. Which of the following statements is ambiguous?
   a. Cathy saw a woman give birth on her television.
   b. George earns a good salary at his new job.
   c. Illegal immigrants are not entitled to Social Security benefits.
   d. Drug-sniffing dogs can be seen in airports.
   e. Cell phone service is available in Anchorage.

   ANS: A PTS: 2

5. The following dispute:

   Tony: My friend Harold thinks that he is doing a lot of good in his new career as a criminal lawyer.
   Sue: That's ridiculous. Lawyers who are criminals rarely if ever do any good.

   is best described as:
   a. Factual.
   b. Verbal arising from ambiguity.
   c. Legal.
   d. Fundamental.
   e. Verbal arising from vagueness.

   ANS: B PTS: 2

6. The following dispute:

   Ann: I hear that our troops in Iraq have been torturing prisoners by kicking and beating them.
   Steve: Don't be silly. That's not torture, it's just rough treatment.

   is best described as:
   a. Factual.
   b. Political.
   c. Verbal arising from ambiguity.
   d. Verbal arising from vagueness.
   e. Dispositional.

   ANS: D PTS: 2

7. Which of the following words is a term?
   a. Meg Ryan.
   b. Finally.
   c. Therefore.
   d. On the roof of the house.
   e. In the near future.

   ANS: A PTS: 2

8. Which of the following are all denoted by the term "city"?
   a. French, Italian, Spanish, American.
   b. Museums, schools, banks, restaurants.
   c. Paris, Rome, Madrid, San Francisco.
   d. Large, populous, charming, historic.
   e. France, Italy, Spain, United States.

   ANS: C PTS: 2

9. Which of the following are all connoted by the term "sculptor"?
   a. Spanish, French, Italian, Swiss.
   b. Baroque, rococo, renaissance, modern.
   c. Michelangelo, Rodin, Giacometti, Picasso.
   d. Marble, wood, bronze, iron.
   e. Visual, sensitive, skilful, dexterous.

   ANS: E PTS: 2

10. Which of the following terms have the same extension?
    a. Pound of iron, pound of feathers.
    b. Sacramento, capital of California.
    c. North Pole, South Pole.
    d. Pint of water, pint of lemonade.
    e. New York City, Los Angeles.

    ANS: B PTS: 2

11. Which of the following groups of terms is in the order of increasing intension?
    a. Vehicle, automobile, Honda, Accord.
    b. Automobile, Honda, vehicle, accord.

c. Automobile, vehicle, Accord, Honda.
d. Accord, Honda, automobile, vehicle.
e. Accord, vehicle, Honda, automobile.

ANS: A PTS: 2

12. Which of the following groups of terms is in the order of increasing extension?
a. Weapon, firearm, hand-gun, six-shooter.
b. Hand-gun, firearm, weapon, six-shooter.
c. Six-shooter, hand-gun, firearm, weapon.
d. Firearm, hand-gun, weapon, six-shooter.
e. Weapon, six-shooter, hand-gun, firearm.

ANS: C PTS: 2

13. Which of the following are both intensional definitions?
a. Etymological definition, enumerative definition.
b. Synonymous definition, definition by genus and difference.
c. Demonstrative definition, definition by subclass.
d. Operational definition, enumerative definition.
e. Synonymous definition, demonstrative definition.

ANS: B PTS: 2

14. Which of the following are both extensional definitions?
a. Enumerative definition, synonymous definition.
b. Definition by genus and difference, definition by subclass.
c. Operational definition, enumerative definition.
d. Definition by subclass, demonstrative definition.
e. Demonstrative definition, etymological definition.

ANS: D PTS: 2

15. In the definition "'Material' means the substance of which something is made or composed" the definiens is:
a. Something is made or composed.
b. Substance.
c. Material.
d. Something.
e. The substance of which something is made or composed.

ANS: E PTS: 2

16. In the definition "'Heel' means the back part of the foot in humans, below and behind the ankle" the definiendum is:
a. The back part of the foot in humans.
b. Foot.
c. Heel.
d. The back part of the foot in humans, below and behind the ankle.
e. Below and behind the ankle.

ANS: C PTS: 2

17. The definition "'Parlor' means a room for receiving visitors" is an example of:
a. A definition by genus and difference.
b. A theoretical definition.

c. A precising definition.
d. A definition by subclass.
e. An etymological definition.

ANS: A PTS: 2

18. The definition "'Grain' means (1) a small hard seed, (2) a unit of weight, (3) the arrangement or direction of the fibers in wood" is an example of:
a. An enumerative definition.
b. A theoretical definition.
c. A precising definition.
d. A stipulative definition.
e. A lexical definition.

ANS: E PTS: 2

19. The definition "'Butterfloth' means an insect that results from crossbreeding a butterfly with a moth" is an example of:
a. An enumerative definition.
b. A synonymous definition.
c. A lexical definition.
d. A stipulative definition.
e. A persuasive definition.

ANS: D PTS: 2

20. The definition "'Sports utility vehicle' means an unwieldy pile of vehicular machinery that consumes massive quantities of fuel, emits inordinate amounts of polluting gasses, and is prone to roll over in crashes" is an example of:
a. A precising definition.
b. A persuasive definition.
c. A theoretical definition.
d. An automotive definition.
e. An operational definition.

ANS: B PTS: 2

21. The definition "'Reptile' means a snake, lizard, turtle, crocodile, and so on" is an example of:
a. A precising definition.
b. An enumerative definition.
c. A persuasive definition.
d. A demonstrative definition.
e. A definition by subclass.

ANS: E PTS: 2

22. The definition "A smooth surface is 'level' if and only if a marble placed on any part of the surface doesn't roll" is an example of:
a. A definition by genus and difference.
b. An operational definition.
c. A lexical definition.
d. A definition by subclass.
e. A stipulative definition.

ANS: B PTS: 2

23. The definition "'Jurist' means someone such as William Brennan, Louis Brandeis, Benjamin Cardozo, and Oliver Wendell Holmes" is an example of:
    a. A definition by subclass.
    b. An operational definition.
    c. An enumerative definition.
    d. A demonstrative definition.
    e. A stipulative definition.

    ANS: C PTS: 2

24. The definition "'Soft' means, in regard to water, containing less than 60 milligrams of dissolved calcium and magnesium per liter" is an example of:
    a. A precising definition.
    b. An operational definition.
    c. A synonymous definition.
    d. A hydrostatic definition.
    e. An etymological definition.

    ANS: A PTS: 2

25. The definition "'Pusillanimous' means cowardly" is an example of:
    a. A demonstrative definition.
    b. A theoretical definition.
    c. A definition by genus and difference.
    d. A synonymous definition.
    e. A precising definition.

    ANS: D PTS: 2

26. The definition "'Burn' means to give off heat by combining with oxygen; to oxidize" is an example of:
    a. A persuasive definition.
    b. An extensional definition.
    c. A definition by genus and difference.
    d. A thermodynamic definition.
    e. A theoretical definition.

    ANS: E PTS: 2

27. The definition "'Desk' means *that* and *that* and *that*" (as you point to a number of desks) is an example of:
    a. A lexical definition.
    b. A demonstrative definition.
    c. A definition by subclass.
    d. An enumerative definition.
    e. A precising definition.

    ANS: B PTS: 2

28. The definition "'Retain' derives from the Latin words *tenere* which means hold, and *re*, which mean back" is an example of:
    a. An etymological definition.
    b. A stipulative definition.
    c. A synonymous definition.
    d. An operational definition.
    e. An ostensive definition.

ANS: A PTS: 2

29. In the definition "'Robin' means a large North American songbird having a chestnut-red breast and abdomen" the genus term is:
    a. Abdomen.
    b. Songbird.
    c. Robin.
    d. Chestnut-red breast and abdomen.
    e. North American.

    ANS: B PTS: 2

30. In the definition "'Martyr' means a person who willingly suffers death rather than renounce his or her religion" the species term is:
    a. Who willingly suffers death rather than renounce his or her religion.
    b. Who willingly suffers death.
    c. Person.
    d. Martyr.
    e. Religion.

    ANS: D PTS: 2

31. In the definition "'Nest' means a bowl-shaped structure prepared by a bird for incubating eggs and rearing young" the difference words are (select the best answer):
    a. Nest, structure.
    b. Prepared by a bird.
    c. Bowl-shaped, prepared by a bird for incubating eggs and rearing young.
    d. Bowel-shaped structure.
    e. For incubating eggs and rearing young.

    ANS: C PTS: 2

32. As a lexical definition, the definition "'Clock' means an electrical device that keeps time" may be criticized as:
    a. Being figurative.
    b. Being ambiguous.
    c. Being too broad.
    d. Being negative.
    e. Being too narrow.

    ANS: E PTS: 2

33. As a lexical definition, the definition "'Congruence' means the condition of being congruent" may be criticized as:
    a. Being figurative.
    b. Being circular.
    c. Being obscure.
    d. Being affective.
    e. Being vague.

    ANS: B PTS: 2

34. As a lexical definition, the definition "'Mop' means a terminally attached particulate disengager" may be criticized as:
    a. Being circular.

b. Failing to indicate the context to which the definiens pertains.
c. Being affective.
d. Being obscure.
e. Being affective.

ANS: D PTS: 2

35. As a lexical definition, the definition "'Intelligible' means not being unintelligible" may be criticized as:
a. Being negative.
b. Being too broad.
c. Being figurative.
d. Failing to convey the essential meaning of the word being defined.
e. Being too narrow.

ANS: A PTS: 2

36. As a lexical definition, Lord Webb-Johnson's multiple definition "A neurotic is a person who builds a castle in the air. A psychotic is a man who lives in it. And a psychiatrist is a man who collects the rent" may be criticized as:
a. Being negative.
b. Being obscure.
c. Being figurative.
d. Being ambiguous.
e. Being circular.

ANS: C PTS: 2

37. As a lexical definition, Ambrose Bierce's definition of logic as "The art of thinking and reasoning in strict accordance with the limitations and incapacities of the human misunderstanding" may be criticized as:
a. Being too broad.
b. Being too narrow.
c. Being negative.
d. Being figurative.
e. Being affective.

ANS: E PTS: 2

38. As a lexical definition, the definition "'Warhead' means the uppermost section of a guided missile" may be criticized as:
a. Being too narrow.
b. Being too broad.
c. Failing to indicate the context to which the definiens pertains.
d. Failing to convey the essential meaning of the word being defined.
e. Being obscure.

ANS: D PTS: 2

39. As a lexical definition, the definition "'Poem' means a composition that expresses feelings" may be criticized as:
a. Being affective.
b. Being vague.
c. Being ambiguous.
d. Failing to indicate the context to which the definiens pertains.

e. Being circular.

ANS: B PTS: 2

40. As a lexical definition, the definition "'Wife' means a married person" may be criticized as:
a. Being too broad.
b. Being obscure.
c. Being too narrow.
d. Being vague.
e. Being ambiguous.

ANS: A PTS: 2

Chapter 2 Test E

MULTIPLE CHOICE

1. Which of the following statements has primarily cognitive meaning?
   a. Mr. Parker's proposals for reorganizing the company are positively bizarre.
   b. Ansel Adams' photographs are amazingly beautiful.
   c. The government is currently run by maniacs.
   d. The number of deaths linked to prescription drugs is on the rise.
   e. I am disgusted by the proposals to drill for oil in wildlife refuges.

   ANS: D PTS: 2

2. Which of the following statements expresses a value claim?
   a. The war in Iraq is thoroughly immoral.
   b. Any possible cure for malaria must be cheap.
   c. In general, Picasso's paintings sell for more than Miró's.
   d. Castle Rock's new film is projected to earn $63 million in the first week.
   e. Global warming threatens the ice shelves of Antarctica.

   ANS: A PTS: 2

3. Which of the following statements is vague?
   a. Dominique, my roommate, was born in France.
   b. Bob saw the lost dog driving in his car.
   c. This breakfast cereal is made from natural ingredients.
   d. Some sleep disorders can be treated.
   e. Mold causes allergic reactions in many people.

   ANS: C PTS: 2

4. Which of the following statements is ambiguous?
   a. All of the apples that I bought are golden delicious.
   b. The stolen bicycle was found by a man sleeping in the park.
   c. Gail has a new hair do.
   d. Ibuprofen can relieve a headache.
   e. Professor Johnson, my anthropology teacher, is old.

   ANS: B PTS: 2

5. The following dispute:

   Tina: Megan said just a minute ago that her new apartment is on Pine Street.
   Carl: You must be going deaf. She said that her apartment is on Palm Street.

   is best described as:
   a. Verbal arising from vagueness.
   b. Auditory.
   c. Verbal arising from ambiguity.
   d. Transitional.
   e. Factual.

   ANS: E PTS: 2

6. The following dispute:

   Alan: This exhibition of photographs should be shut down. It's clearly pornographic.
   Daisy: How can you say that? The photographs are of the human body, and the human body is beautiful.

   is best described as:
   a. Verbal arising from ambiguity.
   b. Moral.
   c. Verbal arising from vagueness.
   d. Factual.
   e. Aesthetic.

   ANS: C PTS: 2

7. Which of the following words is a term?
   a. Around the corner.
   b. Credibility.
   c. Since.
   d. Fantastic.
   e. Alternately.

   ANS: B PTS: 2

8. Which of the following are all denoted by the term "watchmaker"?
   a. Sales, profits, assets, liabilities.
   b. Stylish, functional, accurate, battery operated.
   c. American, French, Swiss, Japanese.
   d. Timex, Cartier, Omega, Casio.
   e. United States, France, Switzerland, Japan.

   ANS: D PTS: 2

9. Which of the following are all connoted by the term "comedian"?
   a. American, French, Spanish, Italian.
   b. New York, Los Angeles, Las Vegas, Atlantic City.
   c. Jerry Seinfeld, Dan Aykroyd, Steve Martin, Bob Newhart.
   d. Sitcoms, dramas, musicals, fantasies.
   e. Humorous, quick witted, clever, articulate.

   ANS: E PTS: 2

10. Which of the following pairs of terms have the same extension?
    a. Human, twenty-foot tall human.
    b. Resident of Paris, resident of London.
    c. Toyota, Honda.
    d. United Parcel Service, Federal Express.
    e. Collie, poodle.

    ANS: A PTS: 2

11. Which of the following groups of terms are in the order of increasing intension?
    a. Opera singer, soprano, singer, lyric soprano.
    b. Soprano, opera singer, singer, lyric soprano.
    c. Singer, opera singer, soprano, lyric soprano.

d. Lyric soprano, singer, soprano, opera singer.
e. Lyric soprano, soprano, opera singer, singer.

ANS: C PTS: 2

12. Which of the following groups of terms are in the order of increasing extension?
a. Orange, Valencia orange, fruit, citrus fruit.
b. Valencia orange, orange, citrus fruit, fruit.
c. Fruit, citrus fruit, orange, Valencia orange.
d. Orange, citrus fruit, fruit, Valencia orange.
e. Citrus fruit, orange, Valencia orange, fruit.

ANS: B PTS: 2

13. Which of the following are both intensional definitions?
a. Demonstrative definition, operational definition.
b. Definition by genus and difference, ostensive definition.
c. Etymological definition, demonstrative definition.
d. Definition by subclass, definition by genus and difference.
e. Operational definition, synonymous definition.

ANS: E PTS: 2

14. Which of the following are both extensional definitions?
a. Synonymous definition, enumerative definition.
b. Enumerative definition, operational definition.
c. Etymological definition, definition by genus and difference.
d. Definition by subclass, enumerative definition.
e. Operational definition, demonstrative definition.

ANS: D PTS: 2

15. In the definition "'Expert' means a person who has special skill or knowledge in a particular field" the definiens is:
a. Person who has special skill or knowledge in a particular field.
b. Special skill or knowledge.
c. Expert.
d. In a particular field.
e. Person.

ANS: A PTS: 2

16. In the definition "'Ship' means a large vessel propelled by sails or engines" the definiendum is:
a. Large.
b. Vessel.
c. A large vessel propelled by sails or engines.
d. Propelled by sails or engines.
e. Ship.

ANS: E PTS: 2

17. The definition "'Level' means (1) flat or even, (2) parallel to the horizon, (3) a spirit level" is an example of:
a. A geometrical definition.
b. An operational definition.
c. A lexical definition.

d. A stipulative definition.
e. A theoretical definition.

ANS: C PTS: 2

18. The definition "'Chair' means *that* and *that* and *that*" (as you point to a number of chairs) is an example of:
a. A precising definition.
b. A demonstrative definition.
c. A definition by subclass.
d. An operational definition.
e. An enumerative definition.

ANS: B PTS: 2

19. The definition "'Theology' derives from the Greek words *theos*, meaning God, and *logos*, meaning reason or account" is an example of:
a. A definition by genus and difference.
b. A religious definition.
c. An extensional definition.
d. An etymological definition.
e. A stipulative definition.

ANS: D PTS: 2

20. The definition "'Pre-Socratic philosopher' means someone such as Thales, Anaxagoras, Parmenides, or Heraclitus" is an example of:
a. A definition by subclass.
b. A definition by genus and difference.
c. An enumerative definition.
d. A synonymous definition.
e. A philosophical definition.

ANS: C PTS: 2

21. The definition "'Official' means a person appointed or elected to office" is an example of:
a. A precising definition.
b. A synonymous definition.
c. A stipulative definition.
d. A definition by subclass.
e. A definition by genus and difference.

ANS: E PTS: 2

22. The definition "'Covenant' means agreement" is an example of:
a. A synonymous definition.
b. An ostensive definition.
c. A legal definition.
d. An etymological definition.
e. A precising definition.

ANS: A PTS: 2

23. The definition "'Furniture' means tables, chairs, couches, beds, credenzas, and so on" is an example of:
a. A definition by genus and difference.
b. A definition by subclass.

c. An enumerative definition.
d. A demonstrative definition.
e. A synonymous definition.

ANS: B PTS: 2

24. The definition "'Neoconservative' means a political ideologue committed to massive federal deficits, proactive wars, environmental destruction, and special benefits for the wealthiest citizens" is an example of:
a. A lexical definition.
b. A stipulative definition.
c. A theoretical definition.
d. A persuasive definition.
e. A political definition.

ANS: D PTS: 2

25. The definition "'Noisy' means, in relation to a factory, having an average sound level of 87 decibels or greater" is an example of:
a. An operational definition.
b. A lexical definition.
c. An industrial definition.
d. A definition by genus and difference.
e. A precising definition.

ANS: E PTS: 2

26. The definition "A frying pan is 'hot' if and only if it sizzles when you drip a tiny bit of water into it" is an example of:
a. A persuasive definition.
b. A culinary definition.
c. An operational definition.
d. A demonstrative definition.
e. A theoretical definition.

ANS: C PTS: 2

27. The definition "'Star' means a cosmic body that emits electromagnetic radiation as a result of thermo-nuclear fusion deep within its interior" is an example of:
a. A theoretical definition.
b. A demonstrative definition.
c. A persuasive definition.
d. An astronomical definition.
e. An operational definition.

ANS: A PTS: 2

28. The definition "'Cyberomeo' means a guy who arranges sexual encounters on the Internet" is an example of:
a. A personal definition.
b. A demonstrative definition.
c. A lexical definition.
d. A stipulative definition.
e. An operational definition.

ANS: D PTS: 2

29. In the definition "'Directory' means a book containing an alphabetical index of the names and addresses of persons in an area" the genus term is:
    a. Names and addresses of persons in an area.
    b. Book.
    c. Alphabetical index.
    d. Directory.
    e. Names and addresses.

    ANS: B PTS: 2

30. In the definition "'Fluoride' means a salt of hydrofluoric acid consisting of two elements, one of which is fluorine" the species term is:
    a. Consisting of two elements one of which is fluorine.
    b. Fluoride.
    c. Salt.
    d. Fluorine.
    e. Hydrofluoric acid.

    ANS: C PTS: 2

31. In the definition "'Factory' means a building containing facilities for the manufacture of goods" the difference words are:
    a. Manufacture, goods.
    b. Manufacture of goods.
    c. Building containing facilities for the manufacture of goods.
    d. Factory, building.
    e. Containing facilities for the manufacture of goods.

    ANS: E PTS: 2

32. As a lexical definition, Edgar Shoaff's definition "Advertising is the art of making whole lies out of half truths" may be criticized as:
    a. Being negative.
    b. Being too narrow.
    c. Being figurative.
    d. Being affective.
    e. Being too broad.

    ANS: D PTS: 2

33. As a lexical definition, the definition "'Hourglass' means a device consisting of two conically shaped chambers containing sand and connected at their apexes" may be criticized as:
    a. Failing to convey the essential meaning of the word being defined.
    b. Being figurative.
    c. Being vague.
    d. Being ambiguous.
    e. Failing to indicate the context to which the definiens pertains.

    ANS: A PTS: 2

34. As a lexical definition, the definition "'Seditious' means given to sedition" may be criticized as:
    a. Failing to convey the essential meaning of the word being defined.
    b. Being circular.
    c. Being too broad.

d. Being ambiguous.
e. Being vague.

ANS: B PTS: 2

35. As a lexical definition, the definition "'Hoe' means a tool used for gardening" may be criticized as:
a. Being obscure.
b. Failing to indicate the context to which the definiens pertains.
c. Being ambiguous.
d. Being affective.
e. Being too broad.

ANS: E PTS: 2

36. As a lexical definition, the definition "'Art' is what separates man from beast" may be criticized as:
a. Being circular.
b. Being vague.
c. Being ambiguous.
d. Being figurative.
e. Being negative.

ANS: B PTS: 2

37. As a lexical definition, Ambrose Bierce's definition "Politician: An eel in the fundamental mud upon which the superstructure of organized society is reared" may be criticized as:
a. Being obscure.
b. Being too narrow.
c. Being figurative.
d. Being too broad.
e. Being negative.

ANS: C PTS: 2

38. As a lexical definition, the definition "'Modest' means not being immodest" may be criticized as:
a. Being negative.
b. Being too broad.
c. Failing to indicate the context to which the definiens pertains.
d. Being too narrow.
e. Being vague.

ANS: A PTS: 2

39. As a lexical definition, the definition "'Bees wax' means the natural ester formed from hexacosanoic acid and triacontanol" may be criticized as:
a. Being ambiguous.
b. Being vague.
c. Being too broad.
d. Being obscure.
e. Being too narrow.

ANS: D PTS: 2

40. As a lexical definition, the definition "'Necklace' means a piece of gold jewelry worn around the neck" may be criticized as:
a. Being obscure.
b. Being affective.

c. Being too broad.
d. Being circular.
e. Being too narrow.

ANS: E PTS: 2

Chapter 2 Test F

MULTIPLE CHOICE

1. Which of the following statements has primarily cognitive meaning?
   a. The movie at the Roxie is fabulous.
   b. Microsoft is currently hiring programmers.
   c. Marty's jokes are really funny.
   d. I love your new hair do.
   e. Some computer games are lots of fun to play.

   ANS: B PTS: 2

2. Which of the following statements expresses a value claim?
   a. Aldous Huxley wrote *Brave New World*.
   b. The market capitalization of Wal-Mart is greater than that of Target.
   c. The goodness or badness of a human action is determined by its consequences.
   d. The Yankees are the best team in major league baseball.
   e. Christo's project in Central Park cost $21 million.

   ANS: D PTS: 2

3. Which of the following statements is vague?
   a. Bob's dog is six years old.
   b. Wine is an alcoholic beverage.
   c. Mr. Harris, my neighbor, is wealthy.
   d. Lung cancer can be fatal.
   e. Cathy told Margaret that she won a prize.

   ANS: C PTS: 2

4. Which of the following statements is ambiguous?
   a. Professor Andrews talked about sex with his students.
   b. Frances lost the election for student body president.
   c. Frank's wife bought him a digital camera.
   d. Rene Descartes was born in 1596.
   e. The problems on this math test are easy.

   ANS: A PTS: 2

5. The following dispute:

   Dave: I see in the paper that the man who has been in a persistent vegetative state for the past 12 years died yesterday.
   Beth: That's not correct. The man died 12 years ago when he permanently lost consciousness. It was only his body that died yesterday.

   is best described as:
   a. Irresolvable.
   b. Theological.
   c. Verbal arising from vagueness.
   d. Factual.
   e. Verbal, arising from ambiguity.

ANS: E PTS: 2

6. The following dispute:

   Meg: I'm certain that the capital of North Dakota is Bismarck.
   Gary: You obviously know nothing about state capitals. Bismarck is the capital of South Dakota.

   is best described as:
   a. Verbal arising from vagueness.
   b. Verbal arising from ambiguity.
   c. Friendly.
   d. Factual.
   e. Geopolitical.

   ANS: D PTS: 2

7. Which of the following words is a term?
   a. Around the corner.
   b. In a hurry.
   c. Equivalent.
   d. Technology.
   e. Completely.

   ANS: B PTS: 2

8. Which of the following are all denoted by the term "country"?
   a. Nation, state, homeland, region.
   b. Paris, France, Berlin, Germany.
   c. Berlin, Paris, Ottawa, Rio de Janeiro.
   d. Autonomous, populated, bordered, governed.
   e. Germany, France, Canada, Brazil.

   ANS: E PTS: 2

9. Which of the following are all connoted by the term "surgeon"?
   a. Hospital, anesthesia, scalpel, oxygen.
   b. Surgery, pain, recovery, scarring.
   c. Dexterous, educated, skilful, experienced.
   d. Nurse, doctor, therapist, aid.
   e. Dr. Bennett, Dr. Adams, Dr. Thompson, Dr. Kaiser.

   ANS: C PTS: 2

10. Which of the following pairs of terms have the same extension?
    a. Currently living dinosaur, unicorn.
    b. Dog, cat.
    c. City, state.
    d. George Washington, Abraham Lincoln.
    e. King, queen.

    ANS: A PTS: 2

11. Which of the following groups of terms are in the order of increasing intension?
    a. Food, desert, pie, cherry pie.

b. Dessert, pie, food, cherry pie.
c. Cherry pie, pie, dessert, food.
d. Pie, food, cherry pie, dessert.
e. Dessert, food, pie, cherry pie.

ANS: A PTS: 2

12. Which of the following groups of terms is in the order of increasing extension?
a. Elected official, citizen, U.S. Senator, Member of Congress.
b. Citizen, elected official, U.S. Senator, Member of Congress.
c. Citizen, elected official, Member of Congress, U.S. Senator.
d. U.S. Senator, Member of Congress, elected official, citizen.
e. Member of Congress, U.S. Senator, citizen, elected official.

ANS: D PTS: 2

13. Which of the following are both intensional definitions?
a. Definition by genus and difference, enumerative definition.
b. Etymological definition, operational definition.
c. Demonstrative definition, definition by subclass.
d. Synonymous definition, enumerative definition.
e. Operational definition, ostensive definition.

ANS: B PTS: 2

14. Which of the following are both extensional definitions?
a. Synonymous definition, etymological definition.
b. Operational definition, demonstrative definition.
c. Definition by subclass, enumerative definition.
d. Enumerative definition, synonymous definition.
e. Definition by genus and difference, operational definition.

ANS: C PTS: 2

15. In the definition "'Consort' means a spouse of a reigning monarch" the definiens is:
a. Spouse.
b. Reigning monarch.
c. Consort.
d. A spouse of a reigning monarch.
e. Monarch.

ANS: D PTS: 2

16. In the definition "'Gloat' means to indulge in malicious or excessive satisfaction" the definiendum is:
a. Indulge.
b. Gloat.
c. Satisfaction.
d. To indulge in malicious or excessive satisfaction.
e. Malicious or excessive satisfaction.

ANS: B PTS: 2

17. The definition "'Fast' means, in relation to a sports car, being able to accelerate from zero to sixty miles per hour in 5 seconds or less" is an example of:
a. A theoretical definition.
b. An operational definition.

c. An automotive definition.
d. A definition by genus and difference.
e. A precising definition.

ANS: E PTS: 2

18. The definition "'Mordant' means caustic" is an example of:
a. A definition by genus and difference.
b. A persuasive definition.
c. A synonymous definition.
d. An operational definition.
e. An extensional definition.

ANS: C PTS: 2

19. The definition "'Marijuana' means a dangerous drug made from the hemp plant that leads its users to cocaine, heroine, and a life of addiction" is an example of:
a. A persuasive definition.
b. A precising definition.
c. A lexical definition.
d. An operational definition.
e. A demonstrative definition.

ANS: A PTS: 2

20. The definition "'Candle' means *that* and *that* and *that*" (as you point to a number of candles) is an example of:
a. A precising definition.
b. An etymological definition.
c. A lexical definition.
d. A demonstrative definition.
e. A definition by genus and difference.

ANS: D PTS: 2

21. The definition "'Hydrohisser' means a cat that accidentally falls into a swimming pool" is an example of:
a. A theoretical definition.
b. A lexical definition.
c. A stipulative definition.
d. A farcical definition.
e. An etymological definition.

ANS: C PTS: 2

22. The definition "'Conception' means the origination of a diploid cell through the union of DNA material from two haploid cells" is an example of:
a. A theoretical definition.
b. A definition by subclass.
c. A physiological definition.
d. An operational definition.
e. An ostensive definition.

ANS: A PTS: 2

23. The definition "'Democracy' derives from the Greek words *demos*, meaning populace and *kratos*, meaning strength or power" is an example of:
    a. A precising definition.
    b. An etymological definition.
    c. A definition by genus and difference.
    d. A political definition.
    e. A theoretical definition.

    ANS: B PTS: 2

24. The definition "'Leg' means (1) a lower limb of a biped, (2) a support for a piece of furniture, (3) a part of a garment" is an example of:
    a. A synonymous definition.
    b. A demonstrative definition.
    c. An anatomical definition.
    d. A persuasive definition.
    e. A lexical definition.

    ANS: E PTS: 2

25. The definition "'Tenor' means someone such as Plácido Domingo, Luciano Pavarotti, José Carreras, or Thomas Hampson" is an example of:
    a. A precising definition.
    b. A demonstrative definition.
    c. A definition by subclass.
    d. An enumerative definition.
    e. A musical definition.

    ANS: D PTS: 2

26. The definition "'Corsair' means a ship used by pirates" is an example of:
    a. An enumerative definition.
    b. A synonymous definition.
    c. A stipulative definition.
    d. A demonstrative definition.
    e. A definition by genus and difference.

    ANS: E PTS: 2

27. The definition "'Organ' means a heart, liver, kidney, or pancreas" is an example of:
    a. A demonstrative definition.
    b. A medical definition.
    c. A definition by subclass.
    d. A stipulative definition.
    e. An enumerative definition.

    ANS: C PTS: 2

28. The definition "A port roast is 'cooked' if and only if a thermometer reads at least 155° F when inserted into the thickest part" is an example of:
    a. A persuasive definition.
    b. An operational definition.
    c. A precising definition.
    d. A military definition.
    e. A theoretical definition.

ANS: B PTS: 2

29. In the definition "'Connoisseur' means a person especially competent to pass critical judgments in an art or in matters of taste" the genus term is:
    a. Person.
    b. Art.
    c. Connoisseur.
    d. Matters of taste.
    e. Especially competent to pass critical judgments in an art or in matters of taste.

    ANS: A PTS: 2

30. In the definition "'Spirit' means the animating principle of life" the species term is:
    a. Animating principle of life.
    b. Principle.
    c. Life.
    d. Animating.
    e. Spirit.

    ANS: E PTS: 2

31. In the definition "'Mask' means a covering for the face, worn to conceal one's identity" the difference word(s) is/are:
    a. Worn to conceal one's identity.
    b. Covering for the face, worn to conceal one's identity.
    c. Mask, identity.
    d. For the face, worn to conceal one's identity.
    e. Covering.

    ANS: D PTS: 2

32. As a lexical definition, the definition "'Royal' means pertaining to royalty" may be criticized as:
    a. Negative.
    b. Failing to indicate the context to which the definiens pertains.
    c. Being circular.
    d. Being affective.
    e. Failing to convey the essential meaning of the word being defined.

    ANS: C PTS: 2

33. As a lexical definition, the definition "'House' means a structure made of wood and intended for human habitation" may be criticized as:
    a. Failing to indicate the context to which the definiens pertains.
    b. Being vague.
    c. Being too broad.
    d. Being circular.
    e. Being too narrow.

    ANS: E PTS: 2

34. As a lexical definition, the definition "'Considerate' means not being inconsiderate" may be criticized as:
    a. Being affective.
    b. Being vague.
    c. Being negative.

d. Being figurative.
e. Failing to convey the essential meaning of the word being defined.

ANS: C PTS: 2

35. As a lexical definition, the definition "'Barbecue' means a container for holding charcoal" may be criticized as:
a. Being ambiguous.
b. Failing to convey the essential meaning of the word being defined.
c. Being obscure.
d. Failing to indicate the context to which the definiens pertains.
e. Being affective.

ANS: B PTS: 2

36. As a lexical definition, the definition "'Pneumonia' means a disease that affects breathing" may be criticized as:
a. Being vague.
b. Being too narrow.
c. Being ambiguous.
d. Being circular.
e. Being ambiguous.

ANS: A PTS: 2

37. As a lexical definition, the definition "'Governor' means an elected official" may be criticized as:
a. Being ambiguous.
b. Being circular.
c. Being too narrow.
d. Being too broad.
e. Being figurative.

ANS: D PTS: 2

38. As a lexical definition, H. L. Mencken's definition "Democracy is the art of running the circus from the monkey cage" may be criticized as:
a. Being too narrow.
b. Being circular.
c. Being too broad.
d. Being negative.
e. Being figurative.

ANS: E PTS: 2

39. As a lexical definition, Ambrose Bierce's definition "'Historian: A broad-gauge gossip" may be criticized as:
a. Being obscure.
b. Being affective.
c. Being negative.
d. Failing to indicate the context to which the definiens pertains.
e. Being ambiguous.

ANS: B PTS: 2

40. As a lexical definition, the definition "'Honey' means a naturally produced mixture of proline, fructose, and gluconic acid" may be criticized as:

a. Being vague.
b. Being too narrow.
c. Being obscure.
d. Being too broad.
e. Being negative.

ANS: C PTS: 2

Chapter 2 Test G

MULTIPLE CHOICE

1. Which of the following words or group of words is not a term?
   a. Author of *Evangeline*.
   b. Easily readable.
   c. Most expensive bottle of wine.
   d. New Guinea.
   e. Agility.

   ANS: B PTS: 2

2. Words and statements that have cognitive meaning are those that:
   a. Convey information.
   b. Convey opinions.
   c. Express arguments.
   d. Express rational connections between statements.
   e. Evoke feelings.

   ANS: A PTS: 2

3. The primary danger of emotively charged words is that they:
   a. Cause arguments to be invalid.
   b. Lead us to confuse premises with conclusion.
   c. Cause arguments to be unsound.
   d. Prompt us to leap to unjustified conclusions.
   e. Incline us to confuse inductive arguments with deductive arguments.

   ANS: D PTS: 2

4. Words such as "excessive," "fresh," and "normal" tend to be:
   a. Emotive.
   b. Ambiguous.
   c. Vague.
   d. Factual.
   e. Extensional.

   ANS: C PTS: 2

5. A claim that something is good, bad, right, or wrong is called a(n):
   a. Traditional claim.
   b. Factual claim.
   c. Vague claim.
   d. Ambiguous claim.
   e. Value claim.

   ANS: E PTS: 2

6. The newspaper headline "Farmer Bill Dies in House" is primarily:
   a. Vague.
   b. Ambiguous.
   c. Evocative.
   d. Analytic.

e. Conventional.

ANS: B PTS: 2

7. The intension of a term consists of:
   a. The members of the class that the term denotes.
   b. The objectives to be accomplished by using the term.
   c. The qualities or attributes that the term connotes.
   d. The subjective feelings in the mind of the speaker or writer.
   e. The class of definitions that a term may have.

   ANS: C PTS: 2

8. Which of the following are all connoted by the term "novelist"?
   a. Moby Dick, The Scarlet Letter, Gone With the Wind.
   b. Melville, Hawthorne, Mitchell.
   c. Creative, literary, imaginative.
   d. Melville, Moby Dick, adventure story.
   e. Love story, horror story, adventure story.

   ANS: C PTS: 2

9. Denotation means roughly the same thing as:
   a. Extension.
   b. Difference.
   c. Intension.
   d. Connotation.
   e. Species.

   ANS: A PTS: 2

10. Which of the following are all denoted by the term "novelist"?
    a. Moby Dick, The Scarlet Letter, Gone With the Wind.
    b. Melville, Hawthorne, Mitchell.
    c. Love story, horror story, adventure story.
    d. Creative, literary, imaginative.
    e. Melville, Moby Dick, adventure story.

    ANS: B PTS: 2

11. Conventional connotation is introduced to deal with the problem that arises because:
    a. Proper names have no intension.
    b. Intension determines extension.
    c. Some words have empty extension.
    d. Increasing intension does not always correspond to decreasing extension.
    e. Words mean different things to different people.

    ANS: E PTS: 2

12. Which of the following pairs of terms have the same extension?
    a. Frog, toad.
    b. Triangle, figure.
    c. Ronald Reagan, George W. Bush.
    d. Unicorn, elephant.
    e. Neil Armstrong, first man on the moon.

ANS: E PTS: 2

13. The term "currently living dinosaur" has:
    a. Closed extension.
    b. Empty intension.
    c. Empty extension.
    d. Meaningless connotation.
    e. Ambiguous extension.

    ANS: C PTS: 2

14. Which of the following groups of terms is in the order of decreasing extension?
    a. Tuna, fish, albacore, ocean fish.
    b. Albacore, tuna, ocean fish, fish.
    c. Fish, tuna, ocean fish, albacore.
    d. Fish, ocean fish, tuna, albacore.
    e. Ocean fish, tuna, albacore, fish.

    ANS: D PTS: 2

15. Which of the following groups of terms is in the order of decreasing intension?
    a. Daisy, flower, plant, living thing.
    b. Flower, plant, living thing, daisy.
    c. Living thing, daisy, plant, flower.
    d. Plant, flower, daisy, living thing.
    e. Living thing, plant, flower, daisy.

    ANS: E PTS: 2

16. In the definition "'Mandolin' means a twelve-stringed lute," the words "a twelve-stringed lute" are the:
    a. Explanandum.
    b. Definiendum.
    c. Explanans.
    d. Definiens.
    e. Explicandum.

    ANS: D PTS: 2

17. In the definition "'Placid' means tranquil," the word "placid" is the:
    a. Definiens.
    b. Definiendum.
    c. Genus.
    d. Difference.
    e. Species.

    ANS: B PTS: 2

18. The definition "'Autocrat' means a monarch ruling with unlimited authority" is an example of a:
    a. Precising definition.
    b. Persuasive definition.
    c. Lexical definition.
    d. Theoretical definition.
    e. Stipulative definition.

    ANS: C PTS: 2

19. The definition "'Mind' means the region of the brain that manipulates symbols" is an example of a:
    a. Lexical definition.
    b. Stipulative definition.
    c. Persuasive definition.
    d. Theoretical definition.
    e. Precising definition.

    ANS: D PTS: 2

20. The definition "'Shaket' means a jacket made of light material that buttons like a shirt" is an example of a:
    a. Lexical definition.
    b. Theoretical definition.
    c. Persuasive definition.
    d. Precising definition.
    e. Stipulative definition.

    ANS: E PTS: 2

21. The definition "'Welfare' means a handout made by the government to lazy people who refuse to work" is an example of a:
    a. Lexical definition.
    b. Persuasive definition.
    c. Precising definition.
    d. Theoretical definition.
    e. Stipulative definition.

    ANS: B PTS: 2

22. The definition "'Bright' means having an intensity of at least 5000 candle power" is an example of a:
    a. Theoretical definition.
    b. Precising definition.
    c. Lexical definition.
    d. Persuasive definition.
    e. Definition by subclass.

    ANS: B PTS: 2

23. The kind of definition that assigns a meaning to a word by indicating the attributes that the word connotes is:
    a. An enumerative definition.
    b. A demonstrative (ostensive) definition.
    c. A theoretical definition.
    d. An intensional definition.
    e. A definition by subclass.

    ANS: D PTS: 2

24. The definition "'Rationalist' means someone such as Descartes, Leibniz, or Spinoza" is an example of:
    a. An enumerative definition.
    b. A definition by subclass.
    c. A definition by genus and difference.
    d. An operational definition.
    e. A demonstrative (ostensive) definition.

    ANS: A PTS: 2

25. In the definition "'Garrulous' means talkative," the word "talkative" is the:
    a. Genus.
    b. Definiendum.
    c. Definiens.
    d. Difference.
    e. Species.

    ANS: C PTS: 2

26. The definition "'Celebrity' means a person who is widely known" is an example of:
    a. A synonymous definition.
    b. An enumerative definition.
    c. A demonstrative (ostensive) definition.
    d. An operational definition.
    e. A definition by genus and difference.

    ANS: E PTS: 2

27. The definition "'Insect' means a fly, wasp, ant, and so on" is an example of:
    a. A definition by subclass.
    b. A demonstrative (ostensive) definition.
    c. A definition by genus and difference.
    d. An enumerative definition.
    e. A synonymous definition.

    ANS: A PTS: 2

28. In the definition "'Newt' means a semiaquatic salamander," the word "semiaquatic" is the:
    a. Extension.
    b. Genus.
    c. Species.
    d. Etymology.
    e. Difference.

    ANS: E PTS: 2

29. In the definition "'Metronome' means an instrument used to mark rhythm," the word "metronome" is the:
    a. Genus.
    b. Connotation.
    c. Species.
    d. Definiens.
    e. Difference.

    ANS: C PTS: 2

30. The definition "'Anthropology' is a word derived from the Greek *anthropos* meaning man and *logos* meaning word, reason, or account" is an example of:
    a. An etymological definition.
    b. A lexical definition.
    c. A definition by subclass.
    d. A persuasive definition.
    e. A synonymous definition.

    ANS: A PTS: 2

31. The definition "'Colossal' means huge" is an example of:
    a. An enumerative definition.
    b. An extensional definition.
    c. A definition by genus and difference.
    d. A definition by subclass.
    e. A synonymous definition.

    ANS: E PTS: 2

32. In the definition "'Bridle' means the headgear worn by a horse," the term "headgear" is the:
    a. Species.
    b. Genus.
    c. Difference.
    d. Definiendum.
    e. Extension.

    ANS: B PTS: 2

33. The definition "A battery is 'dead' if and only if a battery tester shows no deflection when connected to the two poles" is an example of:
    a. A demonstrative (ostensive) definition.
    b. A definition by genus and difference.
    c. An operational definition.
    d. A definition by subclass.
    e. An enumerative definition.

    ANS: C PTS: 2

34. The definition "'Spoon' means this and this and this" (as you point to a number of spoons) is an example of:
    a. An enumerative definition.
    b. A definition by subclass.
    c. An operational definition.
    d. A demonstrative (ostensive) definition.
    e. A definition by genus and difference.

    ANS: D PTS: 2

35. As a lexical definition, the definition "'Cup' means a container for liquid" may be criticized as being:
    a. Too narrow.
    b. Too broad.
    c. Affective.
    d. Circular.
    e. Obscure.

    ANS: B PTS: 2

36. As a lexical definition, Winston Churchill's definition "A fanatic is one who can't change his mind and won't change the subject" may be criticized as being:
    a. Too broad.
    b. Obscure.
    c. Figurative.
    d. Ambiguous.
    e. Negative.

ANS: C PTS: 2

37. As a lexical definition, Will Rogers' definition "A college professor is someone with a lot of big ideas that don't work out" may be criticized as being:
    a. Affective.
    b. Negative.
    c. Ambiguous.
    d. Obscure.
    e. Vague.

    ANS: A PTS: 2

38. As a lexical definition, the definition "A metal is any substance that conducts electricity and retains its shape at room temperature" may be criticized as being:
    a. Too broad.
    b. Too narrow.
    c. Vague.
    d. Ambiguous.
    e. Obscure.

    ANS: B PTS: 2

39. As a lexical definition, the definition "'Discrete' means the condition of not being indiscrete" may be criticized as being:
    a. Too broad.
    b. Ambiguous.
    c. Affective.
    d. Too narrow.
    e. Negative.

    ANS: E PTS: 2

40. As a lexical definition, the definition "A painter's easel is an easel used by a painter" may be criticized as being:
    a. Negative.
    b. Too broad.
    c. Vague.
    d. Circular.
    e. Ambiguous.

    ANS: D PTS: 2

Chapter 2 Test H

MULTIPLE CHOICE

1. Which of the following statements has primarily cognitive meaning?
   a. Meg Ryan's latest film is fantastic.
   b. Allegra is an allergy medication.
   c. Robert is incredibly lazy.
   d. Modern politics is disgusting.
   e. Chocolate chip cookies are delicious.

   ANS: B PTS: 2

2. Which of the following statements expresses a value claim?
   a. Germany defeated Sweden in the soccer tournament.
   b. The Windows operating system is produced by Microsoft.
   c. Kevin enlisted in the Army when he was eighteen.
   d. The two ships collided in the middle of the Atlantic.
   e. *Ulysses* is a wonderful novel.

   ANS: E PTS: 2

3. Which of the following statements is vague?
   a. The United States was the first nation to develop nuclear weapons.
   b. This shirt is made entirely of cotton.
   c. Joe talked to Tom in his dorm room.
   d. The water in this pool is quite warm.
   e. Mary's birthday is on July 12.

   ANS: D PTS: 2

4. Which of the following statements is ambiguous?
   a. Mr. Carter lost a lot of money in the stock market.
   b. The Watergate burglary led to Nixon's resignation.
   c. Judge Harris will issue his ruling on the nude beach today.
   d. The author of *Paradise Lost* is John Milton.
   e. The atomic weight of carbon is 12.

   ANS: C PTS: 2

5. The following dispute:

   Francine: Professor Thompson's economics class is very hard.
   Dorothy: Well, I took that class last year, and I didn't find it hard at all.

   is best described as:
   a. Verbal arising from vagueness.
   b. Unresolvable.
   c. Factual.
   d. Academic.
   e. Verbal arising from ambiguity.

   ANS: A PTS: 2

6. Which of the following words is a term?
   a. For sale.
   b. Highly promising.
   c. Resignation.
   d. Overly generous.
   e. Throughout the winter months.

   ANS: C PTS: 2

7. 'Intension' means roughly the same thing as:
   a. Exposition.
   b. Connotation.
   c. Denotation.
   d. Definiendum.
   e. Reference.

   ANS: B PTS: 2

8. Which of the following are all denoted by the term "philosopher"?
   a. Aristotle, Plato, Descartes, Locke.
   b. Aristotle, Greece, Lyceum, peripatos.
   c. Rationalism, empiricism, idealism, pragmatism.
   d. Introspective, intelligent, rational, curious.
   e. Aristotelianism, Platonism, Cartesianism, Kantianism.

   ANS: A PTS: 2

9. Which of the following are all connoted by the term "poet"?
   a. Iambic, trochaic, dactylic, anapestic.
   b. Ode, sonnet, ballad, elegy.
   c. Dickinson, Wordsworth, Poe, Longfellow.
   d. Imaginative, expressive, sensitive, articulate.
   e. Lyric, pastoral, bucolic, georgic.

   ANS: D PTS: 2

10. Which of the following pairs of terms have the same extension?
    a. Red, green.
    b. Psychologist, psychiatrist.
    c. Baseball player, shortstop.
    d. Novel, Moby Dick.
    e. Vampire, tooth fairy.

    ANS: E PTS: 2

11. Which of the following groups of terms are in the order of increasing intension?
    a. Mallard, duck, waterfowl, bird.
    b. Waterfowl, bird, mallard, duck.
    c. Bird, waterfowl, duck mallard.
    d. Duck, mallard, bird, waterfowl.
    e. Mallard, waterfowl, duck, bird.

    ANS: C PTS: 2

12. Which of the following groups of terms are in the order of increasing extension?
    a. Dwelling, house, large house, mansion.

b. Mansion, large house, house, dwelling.
c. House, mansion, dwelling, large house.
d. Large house, house, mansion, dwelling.
e. Dwelling, large house, house, mansion.

ANS: B PTS: 2

13. Which of the following is always an intensional definition?
a. Enumerative definition.
b. Definition by subclass.
c. Synonymous definition.
d. Demonstrative definition.
e. Stipulative definition.

ANS: C PTS: 2

14. Which of the following is always an extensional definition?
a. Precising definition.
b. Stipulative definition.
c. Theoretical definition.
d. Demonstrative definition.
e. Synonymous definition.

ANS: D PTS: 2

15. In the definition "'Chill' means a sensation of cold attended with shivering," the definiens is:
a. A sensation of cold attended with shivering.
b. Cold attended with shivering.
c. Chill.
d. Attended with shivering.
e. Sensation.

ANS: A PTS: 2

16. In the definition in Question 15 definiendum is:
a. Sensation of cold.
b. Attended with shivering.
c. A sensation of cold attended with shivering.
d. Sensation.
e. Chill.

ANS: E PTS: 2

17. The definition "'Avaricious' means greedy" is an example of:
a. A stipulative definition.
b. A definition by genus and difference.
c. A synonymous definition.
d. An extensional definition.
e. An enumerative definition.

ANS: C PTS: 2

18. The definition "'Marianzy' means a flower that results from crossing a marigold with a daisy" is an example of:
a. An etymological definition.
b. A stipulative definition.

c. An operational definition.
d. A persuasive definition.
e. A definition by subclass.

ANS: B PTS: 2

19. The definition "'Whistleblower' means a back-stabbing employee who reveals company secrets to enemies on the outside" is an example of:
a. A lexical definition.
b. A persuasive definition.
c. A demonstrative definition.
d. A stipulative definition.
e. A precising definition.

ANS: B PTS: 2

20. The definition "'Child' means, for purposes of buying a ticket for admission to the Bijou Theater, a person less than eleven years old" is an example of:
a. A definition by subclass.
b. An operational definition.
c. A lexical definition.
d. A demonstrative definition.
e. A precising definition.

ANS: E PTS: 2

21. The definition "'Gemstone' means a diamond, emerald, sapphire, ruby, and so on" is an example of:
a. A definition by genus and difference.
b. A persuasive definition.
c. A demonstrative definition.
d. A definition by subclass.
e. A precising definition.

ANS: D PTS: 2

22. The definition "'Oxygen' means an element having an atomic weight of 8 and an atomic number of 16" is an example of:
a. An extensional definition.
b. A theoretical definition.
c. A persuasive definition.
d. An etymological definition.
e. A definition by subclass.

ANS: B PTS: 2

23. The definition "'Craft' means (1) a skill or trade, (2) cunning, (3) a small boat" is an example of:
a. A lexical definition.
b. An operational definition.
c. A stipulative definition.
d. A synonymous definition.
e. A demonstrative definition.

ANS: A PTS: 2

24. The definition "'Eiffel Tower' means *that*" (as you point to it) is an example of:
a. A precising definition.

b. An intensional definition.
c. A definition by subclass.
d. A theoretical definition.
e. A demonstrative definition.

ANS: E PTS: 2

25. The definition "'Rare' means, in reference to a steak, that the meat appears red when you cut into it" is an example of:
a. A theoretical definition.
b. A definition by subclass.
c. A persuasive definition.
d. An operational definition.
e. An enumerative definition.

ANS: D PTS: 2

26. The definition "'State' means Oregon, Missouri, Ohio, Vermont, and so on" is an example of:
a. An etymological definition.
b. A synonymous definition.
c. An enumerative definition.
d. A precising definition.
e. A stipulative definition.

ANS: C PTS: 2

27. The definition "'Rust' means oxidized iron" is an example of:
a. An enumerative definition.
b. A definition by genus and difference.
c. A demonstrative definition.
d. A synonymous definition.
e. An etymological definition.

ANS: B PTS: 2

28. The definition "'Phonograph' is a word derived from the Greek words *phon*, meaning 'sound' and *graphein*, meaning 'to write'" is an example of:
a. An etymological definition.
b. A precising definition.
c. An extensional definition.
d. A stipulative definition.
e. A definition by genus and difference.

ANS: A PTS: 2

Definition 1H
Given the definition:
"'Hyena' means a large, carnivorous, Old World mammal having a thick neck, large head, and four-towed feet."

29. In Definition 1H, the genus term is:
a. Mammal.
b. Thick neck.
c. Hyena.
d. Large head.

e. Old World.

ANS: A PTS: 2

30. In Definition 1H, the species term is:
    a. Mammal.
    b. Large.
    c. Hyena.
    d. Head.
    e. Feet.

    ANS: C PTS: 2

31. In Definition 1H, the difference words include (among others):
    a. Hyena, having a thick neck.
    b. Hyena, mammal.
    c. Large, carnivorous.
    d. Carnivorous, mammal.
    e. Mammal, four-towed feet.

    ANS: D PTS: 2

32. As a lexical definition, the definition "'Ocean' means a large body of water" may be criticized as:
    a. Being too narrow.
    b. Being vague.
    c. Being ambiguous.
    d. Being circular.
    e. Being affective.

    ANS: B PTS: 2

33. As a lexical definition, the definition "'Cello' means a stringed musical instrument" may be criticized as:
    a. Being ambiguous.
    b. Being obscure.
    c. Being too narrow.
    d. Being negative.
    e. Being too broad.

    ANS: E PTS: 2

34. As a lexical definition, the definition "'Iceberg' means a berg of ice" may be criticized as:
    a. Being too broad.
    b. Being ambiguous.
    c. Being negative.
    d. Being too narrow.
    e. Being circular.

    ANS: E PTS: 2

35. As a lexical definition, the definition "'Razor' means a cutaneal follicular outgrowth truncator" may be criticized as:
    a. Failing to convey the essential meaning of the word being defined.
    b. Being too broad.
    c. Being too narrow.
    d. Being obscure.

e. Being affective.

ANS: D PTS: 2

36. As a lexical definition, the definition "'Pencil' means a cylindrical piece of wood, a few inches in length, having a graphite core and a piece of soft rubber attached to one end" may be criticized as:
a. Being obscure.
b. Failing to convey the essential meaning of the word being defined.
c. Being circular.
d. Being vague.
e. being ambiguous.

ANS: B PTS: 2

37. As a lexical definition, the definition "'Golf' means a silly activity in which grown adults whack at a small ball with variously shaped sticks until it falls into a hole in the grass" may be criticized as:
a. Being negative.
b. Being too broad.
c. Being affective.
d. Being ambiguous.
e. Being circular.

ANS: C PTS: 2

38. As a lexical definition, the definition "'Female' means not being male" may be criticized as:
a. Being obscure.
b. Being vague.
c. Being too narrow.
d. Being negative.
e. Being too broad.

ANS: D PTS: 2

39. As a lexical definition, the definition "'Statue' means a three dimensional representation made of marble" may be criticized as:
a. Being too narrow.
b. Being too broad.
c. Being affective.
d. Being obscure.
e. Being circular.

ANS: A PTS: 2

40. As a lexical definition, the definition "Sex is the salt of life" may be criticized as:
a. Being too broad.
b. Being figurative.
c. Being negative.
d. Being too narrow.
e. Being circular.

ANS: B PTS: 2

Chapter 2 Test I

MULTIPLE CHOICE

1. Which of the following statements has primarily cognitive meaning?
   a. Most TV shows are boring.
   b. These orchids are gorgeous.
   c. I hate turnips.
   d. Big business can't be trusted.
   e. The capital of Nevada is Carson City.

   ANS: E PTS: 2

2. Which of the following statements expresses a value claim?
   a. Fred inherited a large amount of money from his uncle.
   b. Jane had lunch with her niece today.
   c. The tensile strength of steel is greater than that of copper.
   d. Professor Thompson is a great instructor.
   e. Among the states, California has the largest number of electoral votes.

   ANS: D PTS: 2

3. Which of the following statements is vague?
   a. The Mariners defeated the Yankees by a score of 4 to 2.
   b. Mrs. Adams is really quite young.
   c. World War I was triggered by the assassination of Archduke Ferdinand.
   d. Dr. Kendrick is a large feline veterinarian.
   e. Fido has never had a rabies shot.

   ANS: B PTS: 2

4. Which of the following statements is ambiguous?
   a. Paul watched Kathy throw a ball through the window.
   b. Poverty is rampant in third world nations.
   c. Bill's attitudes are normal for a teenager.
   d. Most film stars are either beautiful or handsome.
   e. Lawrence worked on his project throughout the evening.

   ANS: A PTS: 2

5. The following dispute:

   Margie: Our friend Ann just got a new puppy.
   Adam: I'm afraid you're wrong. What she got was a kitten.

   is best described as:
   a. Verbal arising from ambiguity.
   b. Contentious.
   c. Factual.
   d. Friendly.
   e. Verbal arising from vagueness.

   ANS: C PTS: 2

6. Which of the following words is a term?
   a. Mostly a failure.
   b. Highly dedicated.
   c. Nobel prizes.
   d. Extremely nice.
   e. Above the top shelf.

   ANS: C PTS: 2

7. "Extension" means roughly the same thing as:
   a. Corporeality.
   b. Sense.
   c. Connotation.
   d. Denotation.
   e. Conventional connotation.

   ANS: D PTS: 2

8. Which of the following are all denoted by the term "corporation"?
   a. Gillette, Oracle, Pfizer, Boeing.
   b. Directors, officers, shareholders, employees.
   c. Razors, software, drugs, airplanes.
   d. Bankers, brewers, camera makers, real estate developers.
   e. Large, impersonal, powerful, wealthy.

   ANS: A PTS: 2

9. Which of the following are all connoted by the term "baseball player"?
   a. Yankees, Cubs, Red Sox, Cardinals.
   b. Babe Ruth, Frank Robinson, Ty Cobb, Stan Musial.
   c. Pitcher, catcher, first baseman, shortstop.
   d. New York, Chicago, Boston, St. Louis.
   e. Athletic, cap-wearing, skillful, speedy.

   ANS: E PTS: 2

10. Which of the following pairs of terms have the same extension?
    a. Actor, actress.
    b. Elf, gnome.
    c. Football player, linebacker.
    d. Professor, instructor.
    e. Kansas, Nebraska.

    ANS: B PTS: 2

11. Which of the following groups of terms are in the order of increasing intension?
    a. Shasta daisy, daisy, flower, plant.
    b. Daisy, flower, plant, Shasta daisy.
    c. Flower, plant, daisy, Shasta daisy.
    d. Plant, flower, daisy, Shasta daisy.
    e. Shasta daisy, flower, plant daisy.

    ANS: D PTS: 2

12. Which of the following groups of terms are in the order of increasing extension?
    a. Rainbow trout, trout, fish, animal.

b. Fish, trout, animal, rainbow trout.
c. Animal, fish, trout, rainbow trout.
d. Rainbow trout, fish, trout, animal.
e. Fish, trout, rainbow trout, animal.

ANS: A PTS: 2

13. Which of the following is always an intensional definition?
a. Persuasive definition.
b. Demonstrative definition.
c. Definition by genus and difference.
d. Enumerative definition.
e. Stipulative definition.

ANS: C PTS: 2

14. Which of the following is always an extensional definition?
a. Theoretical definition.
b. Enumerative definition.
c. Etymological definition.
d. Synonymous definition.
e. Precising definition.

ANS: B PTS: 2

15. In the definition "'Fund' means a deposit of money used as a resource or security" the definiens is:
a. Deposit.
b. Deposit of money.
c. Fund.
d. Used as a resource or security.
e. A deposit of money used as a resource or security.

ANS: E PTS: 2

16. In the definition "'Captain' means a person having authority over and responsibility for a group or unit" the definiendum is:
a. Authority.
b. Captain.
c. A person having authority over and responsibility for a group or unit.
d. Responsibility for a group or unit.
e. Person.

ANS: B PTS: 2

17. The definition "'Singer' means someone such as Justin Timberlake, Beyoncé Knowles, Christina Aguilera, and Mariah Carey" is an example of:
a. A demonstrative definition.
b. A stipulative definition.
c. An enumerative definition.
d. A precising definition.
e. A definition by subclass.

ANS: C PTS: 2

18. The definition "'Lawyer' means a humanitarian who selflessly comes to the rescue of fellow citizens unjustly threatened with the loss of life, liberty or property" is an example of:

a. A precising definition.
b. A theoretical definition.
c. A persuasive definition.
d. A lexical definition.
e. A definition by subclass.

ANS: C PTS: 2

19. The definition "'Gravity' means an attractive force that exists between all material particles and varies inversely with the square of the distance between them" is an example of:
a. A demonstrative definition.
b. An operational definition.
c. An enumerative definition.
d. A theoretical definition.
e. An etymological definition.

ANS: D PTS: 2

20. The definition "'Case' means (1) a set of circumstances, (2) a lawsuit, (3) a box for holding something" is an example of:
a. A lexical definition.
b. An enumerative definition.
c. A demonstrative definition.
d. A precising definition.
e. A definition by subclass.

ANS: A PTS: 2

21. The definition "'Hot' means, in relation to bath water, having a temperature of 105° F" is an example of:
a. A synonymous definition.
b. An etymological definition.
c. A theoretical definition.
d. A precising definition.
e. A stipulative definition.

ANS: D PTS: 2

22. The definition "'Catict' means a person addicted to cats" is an example of:
a. A persuasive definition.
b. A precising definition.
c. A definition by subclass.
d. A lexical definition.
e. A stipulative definition.

ANS: E PTS: 2

23. The definition "'Gyrate' derives from the Greek work *gyros*, which means round or curved" is an example of:
a. An operational definition.
b. An etymological definition.
c. A definition by genus and difference.
d. An enumerative definition.
e. A stipulative definition.

ANS: B PTS: 2

24. The definition "'Filly' means a young female horse" is an example of:
    a. A stipulative definition.
    b. A definition by genus and difference.
    c. A synonymous definition.
    d. A definition by subclass.
    e. A demonstrative definition.

    ANS: B PTS: 2

25. The definition "'Dog' means *that* and *that* and *that*" (as you point to a number of dogs) is an example of:
    a. An enumerative definition.
    b. A definition by genus and difference.
    c. A lexical definition.
    d. A precising definition.
    e. A demonstrative definition.

    ANS: E PTS: 2

26. The definition "'Hardboiled' means, in reference to an egg, that it spins rapidly when twirled on a flat surface" is an example of:
    a. A precising definition.
    b. A demonstrative definition.
    c. An etymological definition.
    d. An operational definition.
    e. A definition by genus and difference.

    ANS: D PTS: 2

27. The definition "'Heinous' means wicked" is an example of:
    a. A precising definition.
    b. A theoretical definition.
    c. A synonymous definition.
    d. A definition by genus and difference.
    e. A definition by subclass.

    ANS: C PTS: 2

28. The definition "'Vehicle' means a car, truck, motorcycle, bus, and so on" is an example of:
    a. A theoretical definition.
    b. A definition by subclass.
    c. A circular definition.
    d. A definition by genus and difference.
    e. An enumerative definition.

    ANS: B PTS: 2

Definition 1I
Given the definition:
"'Toad' means a tailless leaping amphibian that feeds on insects and is usually terrestrial but lays its eggs in water."

29. In Definition 1I, the genus term is:
    a. Amphibian.

b. Water.
c. Toad.
d. Insects.
e. Usually terrestrial.

ANS: A PTS: 2

30. In Definition 1I, the species term is:
a. Amphibian.
b. Insects.
c. Toad.
d. Terrestrial.
e. Eggs.

ANS: C PTS: 2

31. In Definition 1I, the difference words include:
a. Water, amphibian.
b. Toad, leaping.
c. Amphibian, usually terrestrial.
d. Insects, toad.
e. Leaping, usually terrestrial.

ANS: E PTS: 2

32. As a lexical definition, the definition "'Relevant' means not being irrelevant" may be criticized as being:
a. Negative.
b. Vague.
c. Too broad.
d. Ambiguous.
e. Too narrow.

ANS: A PTS: 2

33. As a lexical definition, the definition "'Star' means a speck of light up above" may be criticized as:
a. Being affective.
b. Being vague.
c. Being ambiguous.
d. Being operational.
e. Being negative.

ANS: B PTS: 2

34. As a lexical definition, the definition "'Opera' means a form of entertainment involving nonsensical plots, ridiculous costumes, and singers who shriek at the top of their lungs to an audience falling asleep" may be criticized as:
a. Being vague.
b. Being negative.
c. Being ambiguous.
d. Being figurative.
e. Being affective.

ANS: E PTS: 2

35. As a lexical definition, the definition "'Tooth paste' means paste for teeth" may be criticized as:

a. Being ambiguous.
b. Being obscure.
c. Being too broad.
d. Being circular.
e. Being affective.

ANS: D PTS: 2

36. As a lexical definition, the definition "'Knife' means a thin, narrow, rigid piece of steel, often pointed at one end, and having a wood, metal, or hard plastic handle on the other end" may be criticized as:
a. Being figurative.
b. Being obscure.
c. Failing to convey the essential meaning of the word being defined.
d. Being negative.
e. Being ambiguous.

ANS: C PTS: 2

37. As a lexical definition, the definition "'Pillow' means a cushion filled with feathers" may be criticized as:
a. Being obscure.
b. Being affective.
c. Being ambiguous.
d. Being figurative.
e. Being too narrow.

ANS: E PTS: 2

38. As a lexical definition, the definition "'Soap' means water soluble sodium palmitate" may be criticized as:
a. Being ambiguous.
b. Being obscure.
c. Being too broad.
d. Failing to convey the essential meaning of the word being defined.
e. Being vague.

ANS: B PTS: 2

39. As a lexical definition, the definition "'Magnolia' means a flowering tree" may be criticized as:
a. Being too broad.
b. Being negative.
c. Being too narrow.
d. Being figurative.
e. Being obscure.

ANS: A PTS: 2

40. As a lexical definition, the definition "'Religion' means the opiate of the masses" may be criticized as:
a. Being negative.
b. Being ambiguous.
c. Being figurative.
d. Being obscure.
e. Being circular.

ANS: C PTS: 2

Chapter 3 Test A

MULTIPLE CHOICE

INSTRUCTIONS: Select the answer that best characterizes each argument.

1. Mr. Quigley, who is a lobbyist for the oil industry, says that the government should subsidize oil exploration. In view of Mr. Quigley's credentials, it follows that the government should certainly do this.
   a. False cause.
   b. Appeal to unqualified authority.
   c. No fallacy.
   d. Begging the question.
   e. Argument against the person, circumstantial.

   ANS: B PTS: 2

2. Professor Smyth argues for the adoption of stronger standards covering food imported from China. But Smyth is a disgusting leftist ex hippie who reportedly has sex with his female students. Smyth's arguments are trash, just as he is.
   a. Argument against the person, abusive.
   b. Red herring.
   c. Appeal to unqualified authority.
   d. You, too (*tu quoque*).
   e. No fallacy.

   ANS: A PTS: 2

3. Every tile on this kitchen floor is light blue in color. Therefore, the entire floor is light blue in color.
   a. Division.
   b. Begging the question.
   c. Composition.
   d. Hasty generalization.
   e. No fallacy.

   ANS: E PTS: 2

4. Karen argues that it's not right to post the photographs of convicted child molesters on the Internet. Obviously Karen supports child molestation. But these monsters have completely ruined the lives of thousands of children. They can't be allowed to wreak their havoc any longer. Clearly, Karen's argument is misguided.
   a. Missing the point.
   b. No fallacy.
   c. Red herring.
   d. Straw man.
   e. Argument against the person, circumstantial.

   ANS: D PTS: 2

5. Either you spend $200 on a pair of True Religion jeans, or everybody will think you're out of style. It's up to you.
   a. Suppressed evidence.
   b. Accident.
   c. Appeal to force.

d. No fallacy.
e. False dichotomy.

ANS: E PTS: 2

6. Every member of the Viking Society was born in Norway. Therefore, the Viking Society was born in Norway.
   a. No fallacy.
   b. Complex question.
   c. Composition.
   d. Hasty generalization.
   e. Division.

   ANS: C PTS: 2

7. The Ionic Blast hairdryer does a great job removing the frizz from Francesca's hair. Therefore, since Gabriella's hair is virtually identical to Francesca's, probably the Ionic Blast would do a good job removing the frizz from Gabriella's hair.
   a. Slippery slope.
   b. No fallacy.
   c. False cause.
   d. Appeal to unqualified authority.
   e. Weak analogy.

   ANS: B PTS: 2

8. The number of alcoholics has risen steadily for the past 20 years, and so has the number of treatment centers. Therefore, to cut down on alcoholism we should eliminate the treatment centers.
   a. Appeal to ignorance.
   b. Equivocation.
   c. Weak analogy.
   d. False cause.
   e. No fallacy.

   ANS: D PTS: 2

9. Children should be seen and not heard. Therefore, it was wrong for that drowning child to scream for help.
   a. Accident.
   b. No fallacy.
   c. Begging the question.
   d. Hasty generalization.
   e. False dichotomy.

   ANS: A PTS: 2

10. The Northern Express railway train is headed north. Therefore, every car on that train is headed north.
    a. Composition.
    b. Hasty generalization.
    c. No fallacy.
    d. Missing the point.
    e. Division.

    ANS: C PTS: 2

11. You had better believe in God, because if you don't, then you'll suffer the torment of eternal damnation.
    a. Appeal to force.
    b. Missing the point.
    c. Appeal to pity.
    d. No fallacy.
    e. Argument against the person, circumstantial.

    ANS: A PTS: 2

12. Eddie, one of your friends was asking about you the other day. He wanted to know if you were still having sex with 14-year-old girls. What should I tell him the next time I see him? Are you still doing it?
    a. Begging the question.
    b. No fallacy.
    c. Straw man.
    d. Complex question.
    e. Appeal to force.

    ANS: D PTS: 2

13. Every squirrel that has ever been observed likes nuts. Therefore, probably every squirrel likes nuts.
    a. False cause.
    b. No fallacy.
    c. Composition.
    d. Hasty generalization.
    e. Weak analogy.

    ANS: B PTS: 2

14. The government has no right to spy on its citizens because citizens have a right to privacy. And this is true because such a right is guaranteed by the constitution—which follows from the fact that our founding fathers recognized the sanctity of individual privacy against the intrusive power of the government. And of course this is true because the government has no right to spy on its citizens.
    a. No fallacy.
    b. Red herring.
    c. Slippery slope.
    d. Missing the point.
    e. Begging the question.

    ANS: E PTS: 2

15. Nobody has ever proved that the Big Bang theory of the universe is true. Therefore, we must conclude that the Big Bang theory is false.
    a. Complex question.
    b. Composition.
    c. No fallacy.
    d. Missing the point.
    e. Appeal to ignorance.

    ANS: E PTS: 2

16. No spoiled brats are good childhood companions. Therefore, no good childhood companions are spoiled brats.
    a. No fallacy.

b. Red herring.
c. Begging the question.
d. False dichotomy.
e. Amphiboly.

ANS: A PTS: 2

17. Astronomers study stars. Nicole Kidman is a star. Therefore, astronomers study Nicole Kidman.
a. Begging the question.
b. Equivocation.
c. Amphiboly.
d. No fallacy.
e. Composition.

ANS: B PTS: 2

18. Members of the jury, surely you will not find defendant Carlos guilty of burglary. Carlos is a visitor from our neighbor to the south, where he has eight young brothers and sisters. Those poor kids and their impoverished mother live a desperate hand-to-mouth existence. Carlos was hoping only to send a few more dollars home to ease their suffering. In the name of humanity, you must vote to acquit this caring brother.
a. Slippery slope.
b. No fallacy.
c. Missing the point.
d. Appeal to pity.
e. Red herring.

ANS: D PTS: 2

19. The president of our college has promised to stop drinking on campus. Apparently the president has a drinking problem.
a. Equivocation.
b. Appeal to unqualified authority.
c. Amphiboly.
d. No fallacy.
e. Suppressed evidence.

ANS: C PTS: 2

20. Pet owners argue for a law to ensure that pet food is free of lethal contaminants. Apparently they are unaware that half the children of the world eat contaminated food and drink polluted water every day. Thousands of these kids die regularly from cholera. The nations of the world should unite to halt this ongoing tragedy. In the mean time, we can forget about pets.
a. Argument against the person, abusive.
b. Complex question.
c. No fallacy.
d. Straw man.
e. Red herring.

ANS: E PTS: 2

21. Dr. David Sherman of the National Skin Cancer Society reports that tanning salons pose a serious risk for skin cancer. Therefore, we should consider legislation to regulate the tanning industry.
a. No fallacy.
b. False cause.

c. Appeal to unqualified authority.
d. False dichotomy.
e. Appeal to the people.

ANS: A PTS: 2

22. Your little Tommy wants a slingshot for his birthday, but you shouldn't give him one. If you do, next he'll want a B-B gun. Then a 22 rifle. After that it will be a high powered rifle, and then an Uzi and an AK-47. Soon he'll want a bazooka and after that an antiaircraft gun. In no time your home will become an armory.
a. No fallacy.
b. Missing the point.
c. Slippery slope.
d. False cause.
e. Red herring.

ANS: C PTS: 2

23. This cherry pie is delicious. Therefore, every ingredient in this pie is delicious.
a. Appeal to the people.
b. Division.
c. Composition.
d. Hasty generalization.
e. No fallacy.

ANS: B PTS: 2

24. If cleaner cars are produced, then there will be fewer greenhouse gasses. There will be fewer greenhouse gasses. Therefore, cleaner cars will be produced.
a. This argument contains a fallacy of ambiguity.
b. This argument contains no fallacy.
c. This argument contains a fallacy of weak induction.
d. This argument contains a formal fallacy.
e. This argument contains a fallacy of grammatical analogy.

ANS: D PTS: 2

25. Either Kansas or Ohio is situated on the Mississippi River. But Ohio is not on the Mississippi. Therefore, it must be Kansas.
a. Suppressed evidence.
b. Weak analogy.
c. False dichotomy.
d. Amphiboly.
e. No fallacy.

ANS: E PTS: 2

26. While driving on the freeway a big truck cut me off when it changed lanes. A few days earlier another truck tailgated me, and yet another refused to dim its lights. The conclusion is obvious that truckers these days are as rude as they are reckless.
a. Composition.
b. Missing the point.
c. Hasty generalization.
d. No fallacy.
e. Appeal to unqualified authority.

ANS: C PTS: 2

27. Can you believe that some parents want to control their kids' access to the Internet? Who are these autocrats who insist on imposing their views on others? This country was born in a spirit of freedom and self determination. Countless patriots have died to preserve our sacred values. We must cherish those values! We must nurture them in our children! End all mind control now and forever!
    a. Appeal to the people.
    b. No fallacy.
    c. Red herring.
    d. Slippery slope.
    e. Begging the question.

    ANS: A PTS: 2

28. Global warming has never been a big problem in the past. Therefore, it won't be a big problem in the future.
    a. Accident.
    b. Suppressed evidence.
    c. False cause.
    d. Equivocation.
    e. No fallacy.

    ANS: B PTS: 2

29. By accident Shelley left her old fashioned flashlight turned on all night. Therefore, it's likely that the batteries are dead.
    a. False cause.
    b. Appeal to pity.
    c. Hasty generalization.
    d. No fallacy.
    e. Suppressed evidence.

    ANS: D PTS: 2

30. Those boarding a bus are never required to pass through a security checkpoint. Therefore, those boarding an airliner should not be required to pass through a security checkpoint.
    a. Begging the question.
    b. False cause.
    c. Weak analogy.
    d. No fallacy.
    e. Missing the point.

    ANS: C PTS: 2

31. The Bible is unquestionably true because deep in my heart I feel that it is.
    a. Appeal to the people.
    b. No fallacy.
    c. Equivocation.
    d. Begging the question.
    e. Appeal to ignorance.

    ANS: D PTS: 2

32. Our weightlifting coach argues with great conviction about the dangers of steroids, but you really can't take him seriously. I've been told by a trustworthy source that when the coach was our age he popped steroid pills every day.
    a. You, too (*tu quoque*).
    b. Appeal to unqualified authority.
    c. No fallacy.
    d. Argument against the person, abusive.
    e. Straw man.

    ANS: A PTS: 2

33. My friend Connie used a green Bic pen to solve the problems on her last algebra test, and after the test was graded she got an A. So if you want to get an A in algebra, you should work all the test problems with a green Bic pen.
    a. Begging the question.
    b. Appeal to pity.
    c. Argument against the person, abusive.
    d. No fallacy.
    e. False cause.

    ANS: E PTS: 2

34. Nobody has ever heard a monkey talk. Therefore, probably monkeys don't talk.
    a. Appeal to ignorance.
    b. Division.
    c. Hasty generalization.
    d. No fallacy.
    e. Appeal to the people.

    ANS: D PTS: 2

35. Irving is a wonderful cook. But every cook is a human being. Therefore, Irving is a wonderful human being.
    a. Suppressed evidence.
    b. No fallacy.
    c. Equivocation.
    d. Amphiboly.
    e. Composition.

    ANS: C PTS: 2

36. Jim, it's clear that you want that job with the Acme accounting agency. Therefore, to improve your chances, you should tell the interviewer that if he doesn't give you the job you will kidnap one of his children.
    a. Missing the point.
    b. False cause.
    c. Appeal to force.
    d. No fallacy.
    e. Begging the question.

    ANS: A PTS: 2

37. Randy, you have a good eye. Tell me: Do you think this dress makes me look too fat?
    a. Appeal to ignorance.
    b. No fallacy.

c. Begging the question.
d. Complex question.
e. Appeal to unqualified authority.

ANS: B PTS: 2

38. Practically everyone has driven home at one time or other after having had a few drinks. Therefore, you shouldn't have any problem with driving home now, even though you're a bit tipsy.
a. You, too (*tu quoque*).
b. Hasty generalization.
c. No fallacy.
d. Appeal to the people.
e. False dichotomy.

ANS: D PTS: 2

39. It's not possible that Jessica prepared this delicious meal all by herself. Jessica is too stupid to read a cookbook, she can't measure anything, she has absolutely no sense of taste, and she doesn't even know how to boil water.
a. Appeal to the people.
b. No fallacy.
c. Argument against the person, abusive.
d. Appeal to pity.
e. Argument against the person, circumstantial.

ANS: B PTS: 2

40. Benny has argued for a long time for a new national park in Montana, but you really shouldn't listen to him. Benny owns a general store in the proposed vicinity, and if the park is created, he stands to profit handsomely from the flow of visitors.
a. Argument against the person, abusive.
b. Appeal to unqualified authority.
c. Argument against the person, circumstantial.
d. Appeal to ignorance.
e. No fallacy.

ANS: C PTS: 2

Chapter 3 Test B

MULTIPLE CHOICE

INSTRUCTIONS: Select the answer that best characterizes each argument.

1. Frank Larsen argues for stricter gun control. It appears that Frank wants to abolish access to guns altogether. But if law-abiding citizens can't own a gun, then they will have no means of defending themselves against criminals. Obviously Frank's argument is no good.
   a. False cause.
   b. Argument against the person, abusive.
   c. Straw man.
   d. No fallacy.
   e. Red herring.

   ANS: C PTS: 2

2. Dr. Sylvia Newman, the world famous biochemist, says that the widespread use of pesticides poses a serious threat to public health. Therefore, we should take this warning seriously and investigate further the extent of the threat.
   a. Appeal to force.
   b. Appeal to the people.
   c. Appeal to unqualified authority.
   d. Begging the question.
   e. No fallacy.

   ANS: E PTS: 2

3. United Airlines flight 863 was late arriving in Houston, and flight 722 was late getting into LA—as was flight 429. Apparently all United Airlines flights are late these days.
   a. Hasty generalization.
   b. False cause.
   c. No fallacy.
   d. Composition.
   e. Accident.

   ANS: A PTS: 2

4. April Bradley's arguments in favor of solar power are hardly worth listening to. After all, look where she graduated from—North East Texas State. That's hardly Ivy League. And look at how she dresses. Yuck!
   a. Hasty generalization.
   b. Begging the question.
   c. False cause
   d. Argument against the person, abusive.
   e. No fallacy.

   ANS: D PTS: 2

5. Barbara lost 15 pounds after taking the new InstaThin supplement for 6 weeks. Tiffany has the same metabolism, lifestyle, diet, body type, age, height and former weight as Barbara. Therefore, probably Tiffany could lose about 15 pounds if she takes InstaThin for 6 weeks.
   a. Weak analogy.
   b. No fallacy.

c. Amphiboly.
d. Argument against the person, circumstantial.
e. False cause.

ANS: B PTS: 2

6. Whatever you do, never buy a lottery ticket. If you do, soon you'll be betting on horses. Next it will be slot machines in Las Vegas, and then black jack and high stakes poker. In the end you'll be totally broke.
a. Slippery slope.
b. No fallacy.
c. Complex question.
d. False cause.
e. Missing the point.

ANS: A PTS: 2

7. Every component in this table is made of wood. Therefore, the entire table is made of wood.
a. Composition.
b. Weak analogy.
c. No fallacy.
d. False dichotomy.
e. Suppressed evidence.

ANS: C PTS: 2

8. Mr. President, I would advise you to go along with our plan to use Pakistan as a base of operations for invading Iran. After all, I'm sure you don't want your country bombed back to the stone age.
a. Appeal to the people.
b. Appeal to force.
c. No fallacy.
d. Appeal to pity.
e. Division.

ANS: B PTS: 2

9. Senator Dawson argues in favor of legalizing gay marriage. But did you know that the senator has been married three times? And his last divorce was a real doozie. His wife went on and on about their sex life. Apparently the Senator is no good in bed. Enough about that issue ... . Shall we move on?
a. Missing the point.
b. Begging the question.
c. Straw man.
d. Red herring.
e. No fallacy.

ANS: D PTS: 2

10. After eating a Big Mac for breakfast, poor Steve had a heart attack and died. The message is clear: Never eat a Big Mac for breakfast.
a. False cause.
b. Weak analogy.
c. No fallacy.
d. Appeal to unqualified authority.
e. Hasty generalization.

ANS: A PTS: 2

11. The ad for the Ajax house cleaning service reads "Never clean again." Obviously you should never hire that service, because if you do, your house will never be clean again.
    a. Equivocation.
    b. Appeal to ignorance.
    c. You, too (*tu quoque*).
    d. No fallacy.
    e. Amphiboly.

    ANS: E PTS: 2

12. Either you abstain from alcohol completely or one of these days you'll get arrested for drunk driving. So, what will it be?
    a. No fallacy.
    b. False dichotomy.
    c. Straw man.
    d. Appeal to force.
    e. Missing the point.

    ANS: B PTS: 2

13. I know that Harper is a millionaire, but he couldn't have earned that money all by himself—at least not honestly. Harper is a total fool without a shred of business sense, and he wastes every spare nickel on idiotic video games.
    a. Appeal to pity.
    b. Argument against the person, abusive.
    c. No fallacy.
    d. Accident.
    e. Argument against the person, circumstantial.

    ANS: C PTS: 2

14. The time has come to outlaw the use of tobacco in all public places. The noxious vapors from burning cigarettes and the stench of smoldering cigars is revolting to say the least. And that nasty brown slime squirting forth from the foul mouths of chewers is enough to turn one's stomach. End this assault on our health and senses this very instant! Send the filthy tobacco hounds back to where they came from!
    a. No fallacy.
    b. Missing the point.
    c. Slippery slope.
    d. Appeal to the people.
    e. Appeal to pity.

    ANS: D PTS: 2

15. An instant has no duration. But an hour is composed of instants. Therefore, an hour has no duration.
    a. Division.
    b. Amphiboly.
    c. Composition.
    d. Red herring.
    e. No fallacy.

    ANS: C PTS: 2

16. Irene will certainly live to a ripe old age because a palm reader told her that earlier today.
    a. Appeal to unqualified authority.

b. Complex question.
c. No fallacy.
d. Begging the question.
e. Suppressed evidence.

ANS: A PTS: 2

17. Either Coleridge or Longfellow wrote the "Rime of the Ancient Mariner." But it certainly wasn't Longfellow. Therefore, Coleridge wrote it.
a. Division.
b. No fallacy.
c. False dichotomy.
d. Appeal to ignorance.
e. Appeal to the people.

ANS: B PTS: 2

18. Performance enhancing drugs are banned from professional sports. But Viagra is a performance enhancing drug. Therefore, Viagra is banned from professional sports.
a. Composition.
b. No fallacy.
c. Appeal to unqualified authority.
d. Amphiboly.
e. Equivocation.

ANS: E PTS: 2

19. Poor Scooter Libby should never have been sent to jail for lying to a grand jury. Scooter is an honorable man. He devoted his whole life to working for his country. One administration after another asked for his help. And Scooter was always there, ready to serve. Scooter deserved a medal—not jail time.
a. Appeal to unqualified authority.
b. Appeal to force.
c. Appeal to pity.
d. No fallacy.
e. Argument against the person, circumstantial.

ANS: C PTS: 2

20. Umbrella repair has been a dependable job for most of the past 500 years. Therefore, it should be a dependable job for the next 500 years.
a. Accident.
b. False cause.
c. Appeal to the people.
d. Suppressed evidence.
e. Hasty generalization.

ANS: D PTS: 2

21. Nobody has ever seen Tyler play football, baseball, or go skiing or swimming, or engage in any other sport. Probably Tyler doesn't engage in sports.
a. Appeal to pity.
b. False cause.
c. Appeal to ignorance.
d. Begging the question.

e. No fallacy.

ANS: E PTS: 2

22. Mrs. Gladstone's arguments against cuts in Social Security are worthless. As a recipient of Social Security benefits, she would naturally be expected to argue exactly the way she does.
a. Argument against the person, circumstantial.
b. False dichotomy.
c. Straw man.
d. Argument against the person, abusive.
e. No fallacy.

ANS: A PTS: 2

23. Some tunes are oldies and some oldies are classics. Therefore, some tunes are classics.
a. This argument contains a fallacy of weak induction.
b. This argument contains no fallacy.
c. This argument contains a formal fallacy.
d. This argument contains a fallacy of ambiguity.
e. This argument contains a fallacy of relevance.

ANS: C PTS: 2

24. Bob, in most respects you seem to be a bright guy. So that leads me to ask: Do you intend to continue voting for stupid Republicans?
a. False cause.
b. Argument against the person, abusive.
c. Begging the question.
d. No fallacy.
e. Complex question.

ANS: E PTS: 2

25. Ferguson has directed the college orchestra for the past 8 years, and during that time 5 women players have gotten pregnant. Therefore, to prevent any more pregnancies, Ferguson should be fired immediately.
a. False cause.
b. No fallacy.
c. Suppressed evidence.
d. Weak analogy.
e. Accident.

ANS: A PTS: 2

26. Steel wool is excellent for cleaning dirty pots and pans. Therefore, it would be a good idea to use steel wool to clean your dirty car.
a. Begging the question.
b. Weak analogy.
c. No fallacy.
d. Appeal to force.
e. Missing the point.

ANS: B PTS: 2

27. After spending an entire day fishing, Terry came back with a large minnow. But every minnow is a fish. Therefore, Terry came back with a large fish.

a. Appeal to ignorance.
b. Argument against the person, abusive.
c. Equivocation.
d. No fallacy.
e. Amphiboly.

ANS: C PTS: 2

28. Connor hasn't a shred of athletic ability, and he does well even to breathe. Therefore, he couldn't have swum across Diamond Lake, as he claims to have done. After all, the lake is 3 miles across.
a. Appeal to unqualified authority.
b. Argument against the person, circumstantial.
c. False cause.
d. No fallacy.
e. Argument against the person, abusive.

ANS: D PTS: 2

29. It's good to exercise 30 minutes per day because it rejuvenates your body. And we know it rejuvenates your body because people who exercise live longer than those who don't. And we know they live longer because people who exercise feel better. And this is true because it's good to exercise 30 minutes per day.
a. Begging the question.
b. Composition.
c. No fallacy.
d. Appeal to pity.
e. Slippery slope.

ANS: A PTS: 2

30. Practically all the students in Professor Kane's English class copy their term papers from the Internet. Therefore, since you're in that class, you should do this, too.
a. Begging the question.
b. *Tu quoque* (you, too).
c. Appeal to the people.
d. No fallacy.
e. Accident.

ANS: C PTS: 2

31. If a piece of jewelry is ugly, then it won't sell. Therefore, if a piece of jewelry sells, then it isn't ugly.
a. Equivocation.
b. Weak analogy.
c. Begging the question.
d. Hasty generalization.
e. No fallacy.

ANS: E PTS: 2

32. America is a wealthy nation. Therefore, every American must be wealthy.
a. No fallacy.
b. Division.
c. Hasty generalization.
d. Composition.
e. Appeal to unqualified authority.

ANS: B PTS: 2

33. The speed limit in this neighborhood is 25 miles per hour. Therefore, it was illegal for that ambulance to drive through here at 50 miles per hour.
    a. Accident.
    b. Appeal to unqualified authority.
    c. No fallacy.
    d. You, too (*tu quoque*).
    e. Appeal to force.

    ANS: A PTS: 2

34. In a random sample of 200 students from Northern State University, 150 said that they own an iPod. Therefore, probably at least 50% of the students at Northern State own an iPod.
    a. False cause.
    b. Missing the point.
    c. Hasty generalization.
    d. No fallacy.
    e. Composition.

    ANS: D PTS: 2

35. This cup of coffee contains caffeine. Therefore, every spoonful of it contains caffeine.
    a. Division.
    b. False cause.
    c. No fallacy.
    d. Suppressed evidence.
    e. Composition.

    ANS: C PTS: 2

36. Stem cell research is immoral because anything that involves killing innocent human beings is immoral.
    a. Appeal to ignorance.
    b. Begging the question.
    c. Red herring.
    d. Appeal to the people.
    e. No fallacy.

    ANS: B PTS: 2

37. If you pay him $200 up front, Freddie promises to paint your garage. But you'd be crazy to pay him anything up front because Freddie lies all the time, and every dime he gets his hands on he uses to feed his methamphetamine habit.
    a. No fallacy.
    b. Accident.
    c. Argument against the person, abusive.
    d. False cause.
    e. Argument against the person, circumstantial.

    ANS: A PTS: 2

38. Carol's arguments against abortion aren't worth a hoot. I have it on good evidence that Carol got an abortion herself after a high school sweetheart got her pregnant.
    a. Argument against the person, abusive.

b. Appeal to unqualified authority.
c. No fallacy.
d. Appeal to the people.
e. You, too (*tu quoque*).

ANS: E PTS: 2

39. Most of the residents of the City Heights neighborhood are illiterate. Therefore, it would be a good idea to close the City Heights library. After all, nobody uses it.
a. No fallacy.
b. False cause.
c. Division.
d. Missing the point.
e. Appeal to force.

ANS: D PTS: 2

40. Nobody has ever proved there is intelligent life outside our solar system. Therefore, these efforts to communicate with extraterrestrials are ridiculous.
a. Appeal to unqualified authority.
b. Suppressed evidence.
c. Appeal to ignorance.
d. Hasty generalization.
e. No fallacy.

ANS: C PTS: 2

Chapter 3 Test C

MULTIPLE CHOICE

INSTRUCTIONS: Select the answer that best characterizes each argument.

1. Either you vote for Senator Rogers or you don't care about the environment. The choice is yours.
   a. Complex question.
   b. Begging the question.
   c. No fallacy.
   d. Appeal to force.
   e. False dichotomy.

   ANS: E PTS: 2

2. The Constitution guarantees freedom of speech for everyone. Therefore, children have a right to sass their parents.
   a. Accident.
   b. You, too (*tu quoque*).
   c. Appeal to force.
   d. Missing the point.
   e. No fallacy.

   ANS: A PTS: 2

3. Nobody has ever seen Rosie run, jog, lift weights, ride a bicycle, or engage in any other form of exercise. Probably Rosie doesn't get much exercise.
   a. False cause.
   b. No fallacy.
   c. Appeal to ignorance.
   d. Hasty generalization.
   e. Suppressed evidence.

   ANS: B PTS: 2

4. Carol has a rottweiler dog, and it attacked and seriously injured one of his neighbors. David has a rottweiler and it chewed up his wife. The conclusion is obvious that rottweilers are just plain vicious.
   a. Argument against the person, abusive.
   b. No fallacy.
   c. Red herring.
   d. Hasty generalization.
   e. Composition.

   ANS: D PTS: 2

5. In his testimony to the grand jury, Steve Porter said that the CEO of the Syntex Corporation conspired with the CFO to defraud investors. Therefore, since Porter is in a position to know and has no reason to lie, we can conclude that these officers did indeed engage in such a conspiracy.
   a. No fallacy.
   b. Amphiboly.
   c. Appeal to unqualified authority.
   d. False cause.
   e. Begging the question.

ANS: A PTS: 2

6. Attorney Jane Welch has over 20 suits. Therefore, her wardrobe must be rather substantial.
   a. Division.
   b. Begging the question.
   c. Equivocation.
   d. No fallacy.
   e. Amphiboly.

   ANS: C PTS: 2

7. The vast majority of Americans believe in God. Therefore, you should believe, too.
   a. *Tu quoque* (you, too).
   b. No fallacy.
   c. Argument against the person, circumstantial.
   d. Appeal to the people.
   e. False dichotomy.

   ANS: D PTS: 2

8. Whoever is vain is hard of heart because if they weren't hard of heart they wouldn't be vain.
   a. No fallacy.
   b. False cause.
   c. Appeal to unqualified authority.
   d. Missing the point.
   e. Begging the question.

   ANS: E PTS: 2

9. Bowser, a German shepherd, had a terrible flea problem. But after one application of FleasOff, Bowser had no fleas for four months. Tango is also a German shepherd with a terrible flea problem. Therefore, FleasOff should also be useful in eliminating Tango's fleas.
   a. False cause.
   b. No fallacy.
   c. Weak analogy.
   d. Accident.
   e. Hasty generalization.

   ANS: B PTS: 2

10. Old Mrs. Fogarty has won at Bingo on the last six weekends, which is quite remarkable. Therefore, she is almost certain to lose next weekend.
    a. No fallacy.
    b. Missing the point.
    c. False cause.
    d. Weak analogy.
    e. Argument against the person, circumstantial.

    ANS: C PTS: 2

11. This pamphlet from the hospital says I should eat right before surgery. Apparently I should go into the operating room with a full stomach.
    a. Equivocation.
    b. Appeal to ignorance.
    c. Missing the point.

d. No fallacy.
e. Amphiboly.

ANS: E PTS: 2

12. Every hair on Jane's head is blond. Therefore, Jane is a blond.
a. Composition.
b. Begging the question.
c. No fallacy.
d. Hasty generalization.
e. Division.

ANS: C PTS: 2

13. Sarah argues that all of us should support the school bond issue on the September ballot. But it's obvious why she argues this way. She has six kids currently attending public school. Clearly her argument is worthless.
a. Argument against the person, circumstantial.
b. No fallacy.
c. Appeal to unqualified authority.
d. Argument against the person, abusive.
e. You, too (*tu quoque*).

ANS: A PTS: 2

14. My goodness, Jackie, I haven't seen you since high school. Tell me, are you still as vain as you used to be?
a. Begging the question.
b. Red herring.
c. Appeal to pity.
d. Complex question.
e. No fallacy.

ANS: D PTS: 2

15. Either Honda or Nissan makes the Altima. But it isn't Honda. Therefore Nissan makes the Altima.
a. Suppressed evidence.
b. No fallacy.
c. False dichotomy.
d. Composition.
e. Straw man.

ANS: B PTS: 2

16. Sheri argues in favor of reducing the Defense Department budget. It appears what Sheri wants is no Defense Department at all. But without a Defense Department, we would have no army, navy, or air force, and any foreign nation could invade our country at will. Clearly we can't allow this. Thus, Sheri's argument is crazy.
a. Missing the point.
b. Red herring.
c. Appeal to unqualified authority.
d. No fallacy.
e. Straw man.

ANS: E PTS: 2

17. Anyone who fails a drivers test is allowed to retake it. But a calculus test is no less of a test than a drivers test. Therefore, anyone who fails a calculus test should be allowed to retake it.
    a. False cause.
    b. No fallacy.
    c. Weak analogy.
    d. Accident.
    e. Missing the point.

    ANS: C PTS: 2

18. Betty is opposed to capital punishment by lethal injection. But doctors inject patients with all sorts of medicines every day. For example, vaccines against flu, pneumonia, and tetanus are injected into millions of patients. Antibiotics are injected for a whole host of bacterial infections, and insulin is injected for diabetes. Obviously Betty's views are not supported by the evidence.
    a. Red herring.
    b. Appeal to pity.
    c. No fallacy.
    d. Slippery slope.
    e. Straw man.

    ANS: A PTS: 2

19. Collins is a terrible pool player. But every pool player is a human being. Therefore, Collins is a terrible human being.
    a. Division.
    b. Composition.
    c. Amphiboly.
    d. Equivocation.
    e. No fallacy.

    ANS: D PTS: 2

20. Don Shula, former coach of the Miami Dolphins, says on TV that NutriSystem is guaranteed to help you lose weight. But you really shouldn't take these claims too seriously because Shula is paid thousands of dollars to make these ads.
    a. Appeal to unqualified authority.
    b. No fallacy.
    c. Argument against the person, circumstantial.
    d. Appeal to ignorance.
    e. Appeal to pity.

    ANS: B PTS: 2

21. Harry shouldn't be thrown out of college for cheating. He's been on academic probation for the past year, and this has caused terrible stress. The poor guy hasn't been able to sleep at night, he can't keep his food down, and he's constantly sick with worry about his future. Surely you can find it in your hearts to give him a second chance.
    a. Missing the point.
    b. Appeal to force.
    c. False cause.
    d. No fallacy.
    e. Appeal to pity.

    ANS: E PTS: 2

22. The first thing many airline passengers do on arrival is make a phone call. TravelCom is a company that installs and operates coin operated phones in airports. Therefore, it would be a good idea to buy stock in TravelCom.
    a. Suppressed evidence.
    b. No fallacy.
    c. Accident.
    d. Appeal to ignorance.
    e. Red herring.

    ANS: A PTS: 2

23. This .75 liter bottle of Jack Daniels whiskey is 34% alcohol. Therefore, every one-ounce shot of it is 34% alcohol.
    a. Division.
    b. Suppressed evidence.
    c. No fallacy.
    d. Hasty generalization.
    e. Composition.

    ANS: C PTS: 2

24. Pauline's argument for stricter drug laws is as worn out as she is. Her brain has practically calcified, she can hardly remember anything, and she confuses the letter carrier with the gardener. I'm afraid we'll just have to pass over her argument.
    a. Missing the point.
    b. Argument against the person, abusive.
    c. No fallacy.
    d. Red herring.
    e. Appeal to unqualified authority.

    ANS: B PTS: 2

25. Every hair on Tony's head will fall out within five years. Therefore, Tony will be bald within five years.
    a. Hasty generalization.
    b. False cause.
    c. Composition.
    d. No fallacy.
    e. Division.

    ANS: C PTS: 2

26. Shortly after retiring from his job, Mr. Lopez had a heart attack and died. The same thing happened to Mrs. Harris. I think the message is clear: Whatever you do, never retire from your job.
    a. Hasty generalization.
    b. Slippery slope.
    c. No fallacy.
    d. Appeal to the people.
    e. False cause.

    ANS: E PTS: 2

27. Some halfwits manage to succeed in business. Therefore, some people who manage to succeed in business are halfwits.
    a. Amphiboly.

b. Weak analogy.
c. Begging the question.
d. No fallacy.
e. Argument against the person, abusive.

ANS: D PTS: 2

28. Johnny, you better not tell anyone that I stole the apple from the teacher's desk. I'm sure you don't want to come to class with a bloody nose and a black eye tomorrow.
a. Appeal to force.
b. No fallacy.
c. Argument against the person, circumstantial.
d. Straw man.
e. Appeal to pity.

ANS: A PTS: 2

29. The U.S. has a right to eradicate dictatorships wherever it finds them. Dictators crush the right of self governance given by God to all of his children. Dictators suppress liberty and freedom. They sacrifice the lives of their people to satisfy their own corrupt aims and desires. Dictators are vile monsters! They embody the power of Satan wherever they dwell. Down with dictatorships everywhere!
a. No fallacy.
b. Suppressed evidence.
c. Argument against the person, abusive.
d. Appeal to the people.
e. Appeal to unqualified authority.

ANS: D PTS: 2

30. If U.S. Presidents start more wars, then the U.S. will go broke. If U.S. Presidents start more wars, then every country will boycott U.S. products. Therefore, if every country boycotts U.S. products, then the U.S. will go broke.
a. This argument contains a fallacy of grammatical analogy.
b. This argument contains a fallacy of relevance.
c. This argument contains no fallacy.
d. This argument contains a fallacy of ambiguity.
e. This argument contains a formal fallacy.

ANS: E PTS: 2

31. Colleen, you know something about American history. Tell me, did the civil war start in 1860 or 1861?
a. Begging the question.
b. No fallacy.
c. False dichotomy.
d. Complex question.
e. Missing the point.

ANS: B PTS: 2

32. More and more cars in this state are unable to pass the fuel emissions test. Therefore, it seems clear we should relax the emissions standard.
a. Straw man.
b. No fallacy.
c. Missing the point.

d. Appeal to unqualified authority.
e. Argument against the person, abusive.

ANS: C PTS: 2

33. The song "I lost My Love in Nashville" is very sad. But every song is composed of notes. Therefore, every note in that song is very sad.
a. Division.
b. False cause.
c. Missing the point.
d. No fallacy.
e. Composition.

ANS: A PTS: 2

34. Madam Voodoo, the famous psychic, says she has communicated with departed souls. Therefore, it follows there is life after death.
a. Red herring.
b. Straw man.
c. Argument against the person, abusive.
d. Appeal to unqualified authority.
e. No fallacy.

ANS: D PTS: 2

35. Joe Bradley has thick calluses on both of his hands. Thus, it would appear that Joe does a lot of manual labor.
a. False cause.
b. Accident.
c. No fallacy.
d. Composition.
e. Appeal to ignorance.

ANS: C PTS: 2

36. You should never buy your child a goldfish, because next it will be a hamster and then a rabbit. After that the kid will scream for a cat, and then a dog. Next it will be a horse, then a water buffalo, and finally an elephant. The cost of pet food will drive you to the poor house.
a. No fallacy.
b. Slippery slope.
c. Begging the question.
d. False cause.
e. Appeal to force.

ANS: B PTS: 2

37. Paul's argument against hiring illegal aliens is totally worthless. For six years Paul hired an undocumented nanny from Guatemala to take care of his kids.
a. Argument against the person, abusive.
b. Appeal to unqualified authority.
c. Straw man.
d. No fallacy.
e. You, too (*tu quoque*).

ANS: E PTS: 2

38. There is no possibility that Jenny could have knitted this beautiful scarf. Jenny can hardly count to 10, she has the dexterity of a bull moose, and she has absolutely no sense for style or color.
    a. Composition.
    b. False cause.
    c. Argument against the person, abusive.
    d. No fallacy.
    e. Argument against the person, circumstantial.

    ANS: D PTS: 2

39. Ending one's own life is morally permissible because people are rightfully in charge of their own lives. And this is so because people have the freedom to determine their own destiny. And this follows from the fact that people have the moral right to decide whether they live or die. And this is true because ending one's own life is morally permissible.
    a. Equivocation.
    b. Slippery slope.
    c. False cause.
    d. No fallacy.
    e. Begging the question.

    ANS: E PTS: 2

40. Nobody has ever proved that the universe wasn't created in six days. Therefore, we must conclude that the universe was indeed created in six days, just like it says in *Genesis*.
    a. Appeal to ignorance.
    b. False dichotomy.
    c. No fallacy.
    d. Hasty generalization.
    e. Appeal to unqualified authority.

    ANS: A PTS: 2

Chapter 3 Test D

MULTIPLE CHOICE

INSTRUCTIONS: Select the answer that best characterizes each argument.

1. Professor Harris gives a number of reasons why we should turn off our cell phones during class. It appears that Harris is one of those Luddites who are opposed to technology altogether. No laptops, no iPods, no digital cameras—that's what Harris wants. But that's just ridiculous. Thus, it's clear that Harris is wrong.
   a. No fallacy.
   b. Argument against the person, abusive.
   c. False cause.
   d. Straw man.
   e. Red herring.

   ANS: D PTS: 2

2. Dr. Niels Langer, the universally recognized climatologist, says that global warming is an extremely important problem that must be addressed immediately. Therefore, we should take him at his word and get to work on solving this problem right now.
   a. No fallacy.
   b. Appeal to the people.
   c. Appeal to unqualified authority.
   d. Begging the question.
   e. Appeal to force.

   ANS: A PTS: 2

3. Standard & Poors, Wells Fargo, Goldman Sachs, AIG, Merrill Lynch, Bank of America—all of these companies continue to pay their top executives huge bonuses. It must be the case that every American company pays its top executives huge bonuses.
   a. No fallacy.
   b. False cause.
   c. Hasty generalization.
   d. Composition.
   e. Accident.

   ANS: C PTS: 2

4. Radio host Rush Limbaugh argues that America's foreign policy is a great success. But who is this screwball Limbaugh? He's nothing but a fascist, sexist, homophobic, drug-addicted moron, who will say anything to stir up the ultra right. Every sane person should shut him off.
   a. Begging the question.
   b. Argument against the person, abusive.
   c. False cause
   d. Hasty generalization.
   e. No fallacy.

   ANS: B PTS: 2

5. Dorothy has blue eyes and blond hair. Therefore, probably her identical twin sister Theodora has blue eyes and blond hair.
   a. Argument against the person, circumstantial.

b. Weak analogy.
c. Amphiboly.
d. False cause.
e. No fallacy.

ANS: E PTS: 2

6. It's never a good idea to allow your teenage kids to have a sip of champagne on New Year's Eve. Next you know they'll be drinking beer during TV football games. Then it'll be wine every night at dinner. Then Bloody Marys every morning. Soon they'll be raging alcoholics, and the costs for rehab will be enormous.
   a. Complex question.
   b. No fallacy.
   c. Slippery slope.
   d. False cause.
   e. Missing the point.

   ANS: C PTS: 2

7. Every component in this boat is made of rust-proof material. Therefore, the entire boat is rust-proof.
   a. False dichotomy.
   b. Weak analogy.
   c. Composition.
   d. No fallacy.
   e. Suppressed evidence.

   ANS: D PTS: 2

8. Congressman Baxter, I know you will want to support our application to clear-cut the old growth timber in the Great Northern forest. After all, surely you don't want the media to find out about that affair you've been having with a certain Capitol Hill intern.
   a. Division.
   b. Appeal to the people.
   c. No fallacy.
   d. Appeal to pity.
   e. Appeal to force.

   ANS: E PTS: 2

9. There is a lot of talk these days about the need for greater fuel economy in SUV's. But today's SUV's are really beautiful. The Cadillac Escalade has clean lines, supple leather, and polished hardwood. The Lincoln Navigator features beautiful paint and the feel of strength and security. And the Mercury Mariner has wonderful styling and a great sound system. Who could ask for anything more?
   a. Begging the question.
   b. Red herring.
   c. Straw man.
   d. Missing the point.
   e. No fallacy.

   ANS: B PTS: 2

10. Whatever you do, never accept a date from Ken Bradshaw. The last woman to date Ken broke up with him in just 3 weeks and became a lesbian.
    a. False cause.
    b. Weak analogy.

c. No fallacy.
d. Appeal to unqualified authority.
e. Hasty generalization.

ANS: A PTS: 2

11. Professor Gibson said that he teaches only dead white philosophers. Therefore, it must be the case that all of his students are dead.
a. Equivocation.
b. Appeal to ignorance.
c. You, too (*tu quoque*).
d. No fallacy.
e. Amphiboly.

ANS: E PTS: 2

12. Either you buy me a new Rolls Royce or I'll have to walk to work in the snow. And I'm sure you don't want me to do that.
a. Straw man.
b. No fallacy.
c. False dichotomy.
d. Appeal to force.
e. Missing the point.

ANS: C PTS: 2

13. Tom Larsen could not have written this fine term paper. Tom is as stupid as the day is long, and he can't put three words together to form an intelligent sentence.
a. Argument against the person, abusive.
b. No fallacy.
c. Appeal to pity.
d. Accident.
e. Argument against the person, circumstantial.

ANS: B PTS: 2

14. The war in Iraq was justified beyond any question. America was founded in the spirit of freedom and self-determination, and it finds its destiny in liberating the victims of tyranny wherever they languish! America is a beacon of hope for the oppressed, a refuge for the downtrodden, a shining star of freedom for the whole world! The hand of the Almighty points the way! Every true patriot will heed the clarion call of freedom for all humankind!
a. No fallacy.
b. Missing the point.
c. Slippery slope.
d. Appeal to the people.
e. Appeal to pity.

ANS: D PTS: 2

15. William likes to eat. He also likes to make love. It follows that William likes to eat while he's making love.
a. Red herring.
b. Amphiboly.
c. Division.
d. Composition.

e. No fallacy.

ANS: D PTS: 2

16. The new Grand Dragon of the Ku Klux Klan says that interracial marriage is a crime against nature. Therefore, that interracial couple who just moved into the neighborhood must be a pair of criminals.
    a. No fallacy.
    b. Complex question.
    c. Appeal to unqualified authority.
    d. Begging the question.
    e. Suppressed evidence.

    ANS: C PTS: 2

17. Either Thomas Edison or Samuel F. B. Morse invented the telegraph. But it wasn't Edison. Therefore, Morse invented the telegraph.
    a. No fallacy.
    b. Division.
    c. False dichotomy.
    d. Appeal to ignorance.
    e. Appeal to the people.

    ANS: A PTS: 2

18. Hugo lost an arm in a car accident last year. But surely he will get it back. Most things that are lost turn up sooner or later.
    a. No fallacy.
    b. Equivocation.
    c. Appeal to unqualified authority.
    d. Amphiboly.
    e. Composition.

    ANS: B PTS: 2

19. Judge, surely I'm not obligated to pay $250,000 in back taxes. If you were to decide against me, it would really put a crimp in my finances. I wouldn't be able to afford that new BMW, and my social status in our upscale neighborhood will drop like a rock.
    a. Appeal to pity.
    b. Appeal to force.
    c. Appeal to unqualified authority.
    d. No fallacy.
    e. Argument against the person, circumstantial.

    ANS: A PTS: 2

20. During the past 200 years, the U.S. has not recognized same-sex marriage. Therefore the U.S. will not recognize same-sex marriage in the next 200 years.
    a. Appeal to the people.
    b. False cause.
    c. Suppressed evidence.
    d. Accident.
    e. Hasty generalization.

    ANS: C PTS: 2

21. Nobody has ever seen Mr. Albie walk without crutches. We conclude that Mr. Albie needs crutches to walk.
    a. Appeal to pity.
    b. False cause.
    c. Appeal to ignorance.
    d. Begging the question.
    e. No fallacy.

    ANS: E PTS: 2

22. Floyd Conway has given us his reasons for unrestricted logging in our national forests. But it's obvious why he says these things. Floyd is a lumberjack, and he just wants to ensure that he'll have a job in the years ahead.
    a. Argument against the person, abusive.
    b. False dichotomy.
    c. Straw man.
    d. Argument against the person, circumstantial.
    e. No fallacy.

    ANS: D PTS: 2

23. All political operatives are disingenuous characters and all clever manipulators are disingenuous characters. Thus, all political operatives are clever manipulators.
    a. This argument contains a fallacy of weak induction.
    b. This argument contains no fallacy.
    c. This argument contains a formal fallacy.
    d. This argument contains a fallacy of ambiguity.
    e. This argument contains a fallacy of relevance.

    ANS: C PTS: 2

24. Nancy, I saw you in Smiley's Bar last night. Level with me. Are you still getting drunk on a regular basis?
    a. False cause.
    b. Argument against the person, abusive.
    c. Begging the question.
    d. No fallacy.
    e. Complex question.

    ANS: E PTS: 2

25. During the five years that Clarence has worn a Rolex watch, three of his married friends have gotten a divorce. Thus, to prevent any more divorces, it is essential that he stop wearing that watch.
    a. False cause.
    b. No fallacy.
    c. Suppressed evidence.
    d. Weak analogy.
    e. Accident.

    ANS: A PTS: 2

26. It's dangerous to use a hair dryer while taking a bath. But a rechargeable shaver is an electrical device no less than a hair dryer. Therefore, it's dangerous to use a rechargeable shaver while taking a bath.
    a. Appeal to force.
    b. Begging the question.

c. No fallacy
d. Weak analogy.
e. Missing the point.

ANS: D PTS: 2

27. Mark is a rotten salesman. But every salesman is a person. Therefore, Mark is a rotten person.
a. Argument against the person, abusive.
b. Equivocation.
c. Appeal to ignorance.
d. No fallacy.
e. Amphiboly.

ANS: B PTS: 2

28. Tom is a bit of a dunce when it comes to mathematics, and he hasn't studied a bit for the next test. Therefore, he probably won't do very well on that test.
a. No fallacy.
b. Slippery slope.
c. False cause.
d. Appeal to unqualified authority.
e. Argument against the person, abusive.

ANS: A PTS: 2

29. Libertarians are insensitive to the plight of the poor. We know this is so because they want to abolish the minimum wage. And we know they want to do this because they want to eliminate all restrictions on hiring the poor. And of course this is true because Libertarians are insensitive to the plight of the poor.
a. No fallacy.
b. Composition.
c. Begging the question.
d. Appeal to pity.
e. Slippery slope.

ANS: C PTS: 2

30. The idea that fast food is unhealthy is a lot of hooey. Why, 90% of America eats fast food.
a. Accident.
b. Division.
c. Begging the question.
d. No fallacy.
e. Appeal to the people.

ANS: E PTS: 2

31. We know for certain that no armadillos are aardvarks. It is therefore equally certain that no aardvarks are armadillos.
a. Begging the question.
b. Weak analogy.
c. No fallacy.
d. Hasty generalization.
e. Equivocation.

ANS: C PTS: 2

32. Valerie Norton's new novel is a real thriller. Therefore, every single chapter must be thrilling.
    a. No fallacy.
    b. Division.
    c. Hasty generalization.
    d. Composition.
    e. Appeal to unqualified authority.

    ANS: B PTS: 2

33. The Second Amendment to the Constitution guarantees everyone the right to bear arms. Therefore it should be legal for those undercover Al Qaeda members to buy a carload of shoulder-launched surface-to-air missiles.
    a. Accident.
    b. Appeal to unqualified authority.
    c. No fallacy.
    d. You, too (*tu quoque*).
    e. Appeal to force.

    ANS: A PTS: 2

34. In a random sample of 300 current year Honda Civic Hybrids, 100 had a defect in the fuel injection system. Therefore, probably about a third of that entire production run has a defect in the fuel injection system.
    a. False cause.
    b. Missing the point.
    c. Hasty generalization.
    d. No fallacy.
    e. Composition.

    ANS: D PTS: 2

35. This brick made of 24 caret gold has been sliced into 50 pieces. Therefore, each of the pieces must be 24 caret gold.
    a. Composition.
    b. False cause.
    c. Division.
    d. Suppressed evidence.
    e. No fallacy.

    ANS: E PTS: 2

36. It's absolutely clear that the U.S. should get out of the U.N. National autonomy should never be turned over to foreign nations.
    a. Begging the question.
    b. Appeal to ignorance.
    c. Red herring.
    d. Appeal to the people.
    e. No fallacy.

    ANS: A PTS: 2

37. Movie star Marci Downs says in magazine ads that the new Porsche XKG is the sexiest car on the road. But you shouldn't take what she says too seriously because she's paid thousands of dollars to make these ads.
    a. False cause.

b. Accident.
c. Argument against the person, abusive.
d. No fallacy.
e. Argument against the person, circumstantial.

ANS: D PTS: 2

38. Ed Jackson argues that the war in Iraq was a tragic mistake. But look who's talking! Before his recent discharge, Jackson was participating in the very war he now condemns. Obviously his arguments can't be trusted.
a. Appeal to unqualified authority.
b. You, too (*tu quoque*).
c. No fallacy.
d. Appeal to the people.
e. Argument against the person, abusive.

ANS: B PTS: 2

39. Katie has been squabbling with her fiancé about the details of their wedding. Thus, it would be a good idea for her to hire somebody to beat him up.
a. Division.
b. False cause.
c. Missing the point.
d. No fallacy.
e. Appeal to force.

ANS: C PTS: 2

40. Nobody has ever proved that capitalist economics corrupts people's values, as Karl Marx claimed. Therefore, we must conclude that capitalism does not corrupt people's values.
a. Suppressed evidence.
b. Appeal to ignorance.
c. Appeal to unqualified authority.
d. Hasty generalization.
e. No fallacy.

ANS: B PTS: 2

Chapter 3 Test E

MULTIPLE CHOICE

INSTRUCTIONS: Select the answer that best characterizes each argument.

1. Either you buy me a new Rolex watch, or I'll be late for all my meetings. I'm sure you don't want me to be late, so you'll buy me the Rolex. How about that one with diamonds on the face?
   a. Complex question.
   b. Begging the question.
   c. No fallacy.
   d. Appeal to force.
   e. False dichotomy.

   ANS: E PTS: 2

2. The Contract Clause of the Constitution gives everyone the right to enter into contracts. Therefore, it should be legal to hire a hit man to bump off that guy who's been pestering you.
   a. Appeal to force.
   b. You, too (*tu quoque*).
   c. Accident.
   d. Missing the point.
   e. No fallacy.

   ANS: C PTS: 2

3. Nobody has ever seen Janice Rogers eat beef, chicken, lamb, pork, or any other kind of meat. We conclude that Janice is not a meat eater.
   a. No fallacy.
   b. False cause.
   c. Appeal to ignorance.
   d. Hasty generalization.
   e. Suppressed evidence.

   ANS: A PTS: 2

4. Dr. Williams cheated Medicare by exaggerating expenses, and Dr. Fox cheated by submitting fees for nonexistent patients. Dr. Harris defrauded a dozen insurance companies by requiring unneeded lab tests. The apparent conclusion is that all doctors cheat.
   a. Argument against the person, abusive.
   b. No fallacy.
   c. Red herring.
   d. Hasty generalization.
   e. Composition.

   ANS: D PTS: 2

5. In testimony to the court, Harold Geyser, President of the American Accounting Society, said that the CFO of the Abracadabra Corporation falsified the corporation's financial statements. Therefore, members of the jury, you must conclude that the CFO did indeed falsify these statements.
   a. Amphiboly.
   b. No fallacy.
   c. Appeal to unqualified authority.
   d. False cause.

e. Begging the question.

ANS: B PTS: 2

6. Whatever is bright is intelligent. But the sun is extremely bright. Therefore, the sun is extremely intelligent.
   a. Division.
   b. Begging the question.
   c. Equivocation.
   d. No fallacy.
   e. Amphiboly.

   ANS: C PTS: 2

7. My dear, you shouldn't hesitate a minute before buying a new mink coat. Real fur is in right now, and a full mink is the ultimate in fashion. It tells the whole world that you have exquisite taste and the financial means to express it.
   a. False dichotomy.
   b. No fallacy.
   c. Argument against the person, circumstantial.
   d. Slippery slope.
   e. Appeal to the people.

   ANS: E PTS: 2

8. Scientists have identified a "God gene," which they think is responsible for the widespread belief in a deity. Obviously God planted that gene in humans to ensure their belief in God.
   a. False cause.
   b. Begging the question.
   c. Appeal to unqualified authority.
   d. Missing the point.
   e. No fallacy.

   ANS: B PTS: 2

9. Jason's quartz watch runs about 3 years and 4 months on a fresh battery. Therefore, probably David's watch, which is the same make and model as Jason's, runs about 3 years and 4 months on a fresh battery.
   a. Accident.
   b. False cause.
   c. Weak analogy.
   d. No fallacy.
   e. Hasty generalization.

   ANS: D PTS: 2

10. Jessica has played 8 games of Bingo without winning a single game. Therefore, her chances are much better for winning the next game.
    a. False cause.
    b. Missing the point.
    c. No fallacy.
    d. Weak analogy.
    e. Argument against the person, circumstantial.

    ANS: A PTS: 2

11. The sign on the restaurant wall says "No Smoking Rules Enforced." Therefore, we can probably smoke, since the smoking rules aren't enforced.
    a. Missing the point.
    b. Appeal to ignorance.
    c. Amphiboly.
    d. No fallacy.
    e. Equivocation.

    ANS: C PTS: 2

12. Every ingredient in this new drink concoction is highly alcoholic. Therefore, the drink is highly alcoholic.
    a. No fallacy.
    b. Begging the question.
    c. Composition.
    d. Hasty generalization.
    e. Division.

    ANS: A PTS: 2

13. Renee Richards argues in favor of reducing the patient load of our nurses. But it's obvious why she says this. Renee is a nurse herself, so of course she wants a reduced patient load. Nobody should pay too much attention to her pleas.
    a. You, too (*tu quoque*).
    b. No fallacy.
    c. Appeal to unqualified authority.
    d. Argument against the person, abusive.
    e. Argument against the person, circumstantial.

    ANS: E PTS: 2

14. I can see that you don't want to adopt this little kitten. Why are you so heartless?
    a. Red herring.
    b. Complex question.
    c. Appeal to pity.
    d. Begging the question.
    e. No fallacy.

    ANS: B PTS: 2

15. Either the Nile or the Amazon is the longest river. But the Amazon is not the longest river. Therefore, the Nile is the longest river.
    a. No fallacy.
    b. Suppressed evidence.
    c. False dichotomy.
    d. Composition.
    e. Straw man.

    ANS: A PTS: 2

16. Professor Carson argues in favor of banning skateboards on campus. Apparently Carson is against anything that has wheels. No bicycles, no roller blades, not even any wheelchairs. But handicapped students need their wheelchairs to get around. From this it should be clear that Professor Carson's argument makes no sense.
    a. No fallacy.

b. Red herring.
c. Appeal to unqualified authority.
d. Straw man.
e. Missing the point.

ANS: D PTS: 2

17. It's appropriate for parents to invade their children's privacy to protect them from danger. But the role of government is similar to that of parents. Therefore, it's appropriate for the government to invade the privacy of citizens to protect the country.
a. Missing the point.
b. No fallacy.
c. False cause.
d. Composition.
e. Weak analogy.

ANS: E PTS: 2

18. There is a good deal of concern these days about whether eating fast food is unhealthy. But most fast food is really tasty. Just think of those juicy McDonald's hamburgers dripping with melted cheese, and the wonderful golden fries. And the crispy Chicken McNuggets, the creamy shakes, and the Egg McMuffins. How could anyone complain about today's fast food?
a. No fallacy.
b. Appeal to pity.
c. Red herring.
d. Slippery slope.
e. Straw man.

ANS: C PTS: 2

19. Sylvia is a wonderful ice skater. But every ice skater is a person. Therefore, Sylvia is a wonderful person.
a. Amphiboly.
b. Composition.
c. Equivocation.
d. Division.
e. No fallacy.

ANS: C PTS: 2

20. Witness Clark testified that he saw the defendant emerge from the burgled house with an expensive camera. But, members of the jury, you should reject this testimony because Clark suffers from brain damage, and he has trouble remembering things accurately.
a. Appeal to unqualified authority.
b. No fallacy.
c. Argument against the person, circumstantial.
d. Appeal to ignorance.
e. Appeal to pity.

ANS: B PTS: 2

21. The proposal to ban smoking in the workplace is a terrible idea. Consider the plight of the poor smokers. Just to get a puff, they'll have to go outside, where they'll face the icy blasts of winter, torrential rains in the spring, and the blazing sun in summer. Nobody should ever be subjected to such torture.

a. Missing the point.
b. Appeal to force.
c. False cause.
d. No fallacy.
e. Appeal to pity.

ANS: E PTS: 2

22. During the past 100 years the average minimum wage in the U.S. has been less than $2 per hour. Therefore, during the next 100 years the average minimum wage in the U.S. will be less than $2 per hour.
a. Appeal to ignorance.
b. No fallacy.
c. Accident.
d. Suppressed evidence.
e. Red herring.

ANS: D PTS: 2

23. This one-liter glass vial contains a 3 percent solution of sulfuric acid. Therefore, every cubic centimeter of its contents is a 3 percent solution of sulfuric acid.
a. No fallacy.
b. Suppressed evidence.
c. Division.
d. Hasty generalization.
e. Composition.

ANS: A PTS: 2

24. Philosopher Peter Singer argues for the right to kill handicapped newborn babies. But Singer is a disgusting irreligious crypto Nazi who is sometimes described as the most dangerous man in the world today. Obviously his arguments are nonsense.
a. Missing the point.
b. Argument against the person, abusive.
c. No fallacy.
d. Red herring.
e. Appeal to unqualified authority.

ANS: B PTS: 2

25. Every member of the drill team marches very well. Therefore, the drill team marches very well.
a. Composition.
b. False cause.
c. Hasty generalization.
d. No fallacy.
e. Division.

ANS: A PTS: 2

26. A few days after Margi joined the Democratic Party she broke her foot and lost her job. Therefore, it's important that you never join up with the Democrats.
a. No fallacy.
b. Slippery slope.
c. False cause.
d. Appeal to the people.

e. Hasty generalization.

ANS: C PTS: 2

27. Some individuals with political aspirations are incompetent bozos. Therefore, some incompetent bozos are individuals with political aspirations.
a. Amphiboly.
b. Weak analogy.
c. Begging the question.
d. No fallacy.
e. Argument against the person, abusive.

ANS: D PTS: 2

28. Senator Carter, I'm sure you will be happy to cast the deciding vote for our request to drill for oil in the Big Glacier wilderness area. After all, we know your wife is a double agent for the CIA, and I'm sure you wouldn't want her identity made known to certain foreign governments.
a. No fallacy.
b. Appeal to force.
c. Argument against the person, circumstantial.
d. Straw man.
e. Appeal to pity.

ANS: B PTS: 2

29. This idea of same-sex marriage is an abomination! The Holy Bible says that marriage is between a man and a woman. This sacred rule is engraved in the order of nature by almighty God! Who are these perverts who would undermine the sanctity of holy wedlock? Down with the gays! To hell with the femiNazis!
a. Appeal to unqualified authority.
b. Suppressed evidence.
c. Argument against the person, abusive.
d. No fallacy.
e. Appeal to the people.

ANS: E PTS: 2

30. If media pundits accept bribes, then all credibility will vanish. If media pundits accept bribes, then national cynicism will grow. Thus, if all credibility vanishes, then national cynicism will grow.
a. This argument contains no fallacy.
b. This argument contains a fallacy of relevance.
c. This argument contains a formal fallacy.
d. This argument contains a fallacy of ambiguity.
e. This argument contains a fallacy of grammatical analogy.

ANS: C PTS: 2

31. Cynthia, you know a lot about geography. Tell me. Does Zambia share a border with the Congo?
a. No fallacy.
b. Begging the question.
c. Division.
d. Complex question.
e. Missing the point.

ANS: A PTS: 2

32. Richard has been doing very poorly in biology this term. Therefore, he should schedule an appointment with the professor so he can criticize and berate her teaching ability.
    a. Appeal to unqualified authority.
    b. No fallacy.
    c. Straw man.
    d. Missing the point.
    e. Argument against the person, abusive.

    ANS: D PTS: 2

33. Sugar is sweet. Therefore, its chemical components, carbon, hydrogen, and oxygen, are sweet.
    a. Missing the point.
    b. False cause.
    c. Division.
    d. No fallacy.
    e. Composition.

    ANS: C PTS: 2

34. SureShotJoe, who posts regularly on the Yahoo message boards, says that the stock of Super Tech should triple this year. Referring to Super Tech, he writes, "there stock shood goe throo the roof!" We can only conclude that Super Tech offers a great investment opportunity.
    a. Appeal to unqualified authority.
    b. Straw man.
    c. Argument against the person, abusive.
    d. Red herring.
    e. No fallacy.

    ANS: A PTS: 2

35. After returning from a month-long vacation, Robert turned the key in his usually reliable Camry, but nothing happened. The car must have a dead battery.
    a. Accident.
    b. No fallacy.
    c. False cause.
    d. Composition.
    e. Appeal to ignorance.

    ANS: B PTS: 2

36. The use of marijuana for medical purposes should never be allowed. Before long it will be marijuana for anyone who wants it. Then it will be hash, cocaine, and crack. In no time they'll want crystal, ecstasy, and heroine. In the end everyone will be so drugged out they won't be able to see straight.
    a. Appeal to force.
    b. No fallacy.
    c. Begging the question.
    d. False cause.
    e. Slippery slope.

    ANS: E PTS: 2

37. Professor Wilson argues that it is absolutely wrong for students to plagiarize their work. But who is she to talk? I have it on good evidence that Wilson plagiarized her own work when she was a student.
    a. No fallacy.
    b. Appeal to unqualified authority.

c. Straw man.
d. You, too (*tu quoque*).
e. Argument against the person, abusive.

ANS: D PTS: 2

38. Rachel could not possibly have painted this beautiful landscape scene. Rachel is so inept she doesn't even know which end of the brush goes in the paint. And she hasn't a shred of ability when it comes to color or design.
a. No fallacy.
b. False cause.
c. Argument against the person, abusive.
d. Composition.
e. Argument against the person, circumstantial.

ANS: A PTS: 2

39. The death penalty is clearly immoral. This is so because life is intrinsically valuable. And this follows from the fact that human beings are ends in themselves. And we know this is true because human beings have a right not to be killed—which follows from the fact that the state has no right to take human life. And why is this true? Because the death penalty is clearly immoral.
a. False cause.
b. Slippery slope.
c. Begging the question.
d. No fallacy.
e. Equivocation.

ANS: C PTS: 2

40. Nobody has ever proved that pornography results in increased incidents of rape and child abuse. Thus, we can only conclude that pornography has no effect on the crime rate.
a. False dichotomy.
b. Appeal to ignorance.
c. No fallacy.
d. Hasty generalization.
e. Appeal to unqualified authority.

ANS: B PTS: 2

Chapter 3 Test F

MULTIPLE CHOICE

INSTRUCTIONS: Select the answer that best characterizes each argument.

1. Benjamin Franklin wrote, "Beer is proof that God loves us and wants us to be happy." Therefore, since old Ben would never lie about anything so important as God, we must conclude that God does indeed exist.
   a. Appeal to unqualified authority.
   b. False cause.
   c. No fallacy.
   d. Begging the question.
   e. Argument against the person, circumstantial.

   ANS: A PTS: 2

2. Massachusetts Congressman Barney Frank argues in favor of legalizing gay marriage. But this guy is just another one of those left-wing marriage bashers who doesn't have a clue about the sanctity of marriage as a social institution. Nobody should listen to his nonsense.
   a. Appeal to unqualified authority.
   b. Red herring.
   c. Argument against the person, abusive.
   d. You, too (*tu quoque*).
   e. No fallacy.

   ANS: C PTS: 2

3. Every player on the varsity chess team is very good. Therefore, the team is very good.
   a. Division.
   b. Begging the question.
   c. Composition.
   d. Hasty generalization.
   e. No fallacy.

   ANS: E PTS: 2

4. Marsha Taylor, the college president, argues that it's inappropriate to have condom-dispensing machines on campus. Apparently Taylor is completely anti sex. Just abolish sex altogether. That's what she wants. But without sex there would be no human race. And no animals either. Obviously Taylor's argument makes no sense whatsoever.
   a. Missing the point.
   b. No fallacy.
   c. Red herring.
   d. Straw man.
   e. Argument against the person, circumstantial.

   ANS: D PTS: 2

5. Either you support the administration's policies or you don't deserve to be called a patriotic American. The choice should be obvious.
   a. Accident.
   b. False dichotomy.
   c. Appeal to force.

d. No fallacy.
e. Suppressed evidence.

ANS: B PTS: 2

6. Every word in this sentence is meaningful. Therefore, the sentence is meaningful.
   a. No fallacy.
   b. Complex question.
   c. Composition.
   d. Hasty generalization.
   e. Division.

   ANS: C PTS: 2

7. Andrew's new cell phone works well in fringe areas. Therefore, probably Madison's new cell phone, which is the same make and model as Andrew's, with the same service provider, works well in fringe areas, too.
   a. No fallacy.
   b. Slippery slope.
   c. False cause.
   d. Appeal to unqualified authority.
   e. Weak analogy.

   ANS: A PTS: 2

8. During the two years that Abigail has served as president of the Crescent Society, several of its members have suffered from insomnia. Thus, in the interests of better sleep for these people, the Society should elect a new president.
   a. No fallacy.
   b. Equivocation.
   c. Weak analogy.
   d. Appeal to ignorance.
   e. False cause.

   ANS: E PTS: 2

9. Whoever fires a gun at another person should be arrested. But those cowboys on the movie set are firing their guns at each other. Thus, those cowboys should be arrested.
   a. Hasty generalization.
   b. No fallacy.
   c. Begging the question.
   d. Accident.
   e. False dichotomy.

   ANS: D PTS: 2

10. This unopened can of iced tea contains lemon juice. Therefore, every single spoonful of it contains lemon juice.
    a. Composition.
    b. Hasty generalization.
    c. No fallacy.
    d. Missing the point.
    e. Division.

    ANS: C PTS: 2

11. Frank, I know you'll want to lend me the down payment money for my new house. After all, you wouldn't want the IRS to find out that you failed to report a hundred thousand dollars of income on your last tax return.
    a. Missing the point.
    b. Appeal to force.
    c. Appeal to pity.
    d. No fallacy.
    e. Argument against the person, circumstantial.

    ANS: B PTS: 2

12. So, you insist on going to the movies tonight. Why do you always have to get your own way?
    a. No fallacy.
    b. Complex question.
    c. Straw man.
    d. Begging the question.
    e. Appeal to force.

    ANS: B PTS: 2

13. In a random poll of 400 students from Belview College, 72 percent said that they own a digital camera. Therefore, probably most Belview students own a digital camera.
    a. Weak analogy.
    b. False cause.
    c. Composition.
    d. Hasty generalization.
    e. No fallacy.

    ANS: E PTS: 2

14. Health care is a fundamental right. This is so because citizens have a right to the necessities of life. And this follows from the fact that life is a fundamental right. And naturally this is true because the state has the obligation to protect life. And why is this true? Because the state has an obligation to provide health care. And this follows from the fact that health care is a fundamental right.
    a. Begging the question.
    b. Red herring.
    c. Slippery slope.
    d. Missing the point.
    e. No fallacy.

    ANS: A PTS: 2

15. Nobody has ever proved that the ready availability of guns causes an increase in the number of murders and robberies. Hence, we conclude that the availability of guns has no effect on the frequency of these crimes.
    a. Missing the point.
    b. Composition.
    c. No fallacy.
    d. Appeal to ignorance.
    e. Complex question.

    ANS: D PTS: 2

16. Either Britney Spears is a surgeon or Annette Bening is an astronaut. Therefore, it follows that either Annette Bening is an astronaut or Britney Spears is a surgeon.

a. No fallacy.
b. Red herring.
c. Begging the question.
d. False dichotomy.
e. Amphiboly.

ANS: A PTS: 2

17. Whatever is dull is stupid. This knife is extremely dull. Therefore, this knife is extremely stupid.
a. Amphiboly.
b. Begging the question.
c. Equivocation.
d. No fallacy.
e. Composition.

ANS: C PTS: 2

18. Members of the jury, surely you will not find Dr. Costello liable for amputating the wrong leg of his patient. During four years of medical school this poor man groped and struggled just to get by. Unlike his fellow students, he had no rich parents to pay his way. And during residency he was forced to work 16-hour days, rising before dawn and slaving away long after sunset. And now this lawsuit. Nobody deserves to be treated this way.
a. Red herring.
b. No fallacy.
c. Missing the point.
d. Slippery slope.
e. Appeal to pity.

ANS: E PTS: 2

19. Paul said that his new dog eats virtually anything and is very fond of children. Therefore, you shouldn't let your little boy get anywhere near that dog.
a. Appeal to unqualified authority.
b. Amphiboly.
c. Equivocation.
d. No fallacy.
e. Suppressed evidence.

ANS: B PTS: 2

20. Mary Beth complains that our curriculum is weak in areas relating to diversity. But have you seen that girl's tattoos? They're really something else—especially the red one right above her rear. And she must have a pound of metal stuck in her body. Two big loops hang from her ears, there's a small bar bell through her tongue, and another through her naval. Let's see ... . Shall we move on to the next topic?
a. Straw man.
b. Complex question.
c. No fallacy.
d. Red herring.
e. Argument against the person, abusive.

ANS: D PTS: 2

21. Mr. Thompson, our jeweler, says that the stone in your ring is a sapphire. Since Mr. Thompson has an excellent reputation among jewelers, we conclude that the stone is indeed a sapphire.
a. Appeal to unqualified authority.

b. False cause.
c. No fallacy.
d. False dichotomy.
e. Appeal to the people.

ANS: C PTS: 2

22. Same-sex marriage should never be allowed. If we allow gays to marry each other, then in no time uncles will marry their nephews and nieces. Then fathers will marry their daughters, mothers will marry their sons, and brothers will marry their sisters. Before long, pet owners will marry their dogs and cats, and this will lead to the complete destruction of civilized life.
a. Slippery slope.
b. Missing the point.
c. No fallacy.
d. False cause.
e. Red herring.

ANS: A PTS: 2

23. Sylvia is an American. Americans are 12 percent black, 4 percent Asian, and 13 percent Hispanic. Therefore, Sylvia is 12 percent black, 4 percent Asian, and 13 percent Hispanic.
a. Hasty generalization.
b. Appeal to the people.
c. Composition.
d. Division.
e. No fallacy.

ANS: D PTS: 2

24. If TV programs become more inane, then viewers will be bored even further. Viewers will be bored even further. Therefore, TV programs will become even more inane.
a. This argument contains no fallacy.
b. This argument contains a formal fallacy.
c. This argument contains a fallacy of weak induction.
d. This argument contains a fallacy of ambiguity.
e. This argument contains a fallacy of grammatical analogy.

ANS: B PTS: 2

25. Either Thomas Jefferson or Alexander Hamilton participated in writing the *Federalist Papers*. But Jefferson did not participate in this project. Therefore, it was Hamilton who participated.
a. No fallacy.
b. Weak analogy.
c. False dichotomy.
d. Amphiboly.
e. Suppressed evidence.

ANS: A PTS: 2

26. Casey, Morgan, and Lawrence are freshman college students, and all of them are staunch Libertarians. It must be the case that all freshmen are staunch Libertarians.
a. Appeal to unqualified authority.
b. Missing the point.
c. Composition.
d. No fallacy.

e. Hasty generalization.

ANS: E PTS: 2

27. These environmentalists have gone overboard. Who are these crazies who dictate what we can do with our own property? This great nation was founded in the spirit of capitalism, and free enterprise! The sacred right of private property is grounded in the commands of almighty God! Down with the nature-nuts! Away with the eco-maniacs!
a. Slippery slope.
b. No fallacy.
c. Red herring.
d. Appeal to the people.
e. Begging the question.

ANS: D PTS: 2

28. During the past 200 years nobody has ever been cured of Lou Gehrig's disease. Therefore, nobody will be cured of Lou Gehrig's disease in the next 200 years.
a. False cause.
b. Accident.
c. Suppressed evidence.
d. Equivocation.
e. No fallacy.

ANS: C PTS: 2

29. Tricia is coughing and sneezing, and her head is all stuffed up. Tricia must have a cold.
a. Appeal to pity.
b. No fallacy.
c. Hasty generalization.
d. False cause.
e. Suppressed evidence.

ANS: B PTS: 2

30. Congressman Henderson is a tall man with brown hair and blue eyes, and he supports the upcoming bill on handguns. Congressman Wagner is also a tall man with brown hair and blue eyes. Thus, he probably supports the handgun bill, too.
a. Weak analogy.
b. False cause.
c. Begging the question.
d. No fallacy.
e. Missing the point.

ANS: A PTS: 2

31. The outsourcing of jobs by American companies is clearly beneficial. These jobs go to people in India and Southeast Asia where good jobs are scarce.
a. Appeal to the people.
b. No fallacy.
c. Equivocation.
d. Begging the question.
e. Appeal to ignorance.

ANS: D PTS: 2

32. Jordan argues against alcohol abuse in fraternities. What a hypocrite! When Jordan was a student he was the biggest binge drinker on campus. His arguments are a joke.
    a. Straw man.
    b. Appeal to unqualified authority.
    c. No fallacy.
    d. Argument against the person, abusive.
    e. You, too (*tu quoque*).

    ANS: E PTS: 2

33. Whatever you do, never ask Haley Burns for a date. A few months after Victor started dating Haley he began suffering from erectile dysfunction.
    a. Argument against the person, abusive.
    b. Appeal to pity.
    c. False cause.
    d. No fallacy.
    e. Begging the question.

    ANS: C PTS: 2

34. Nobody has ever seen Paul Carson go to church or participate in any religious activity. Therefore, probably Paul has no formal religious beliefs.
    a. No fallacy.
    b. Division.
    c. Hasty generalization.
    d. Appeal to ignorance.
    e. Appeal to the people.

    ANS: A PTS: 2

35. Stacy is a terrible poker player. But every poker player is a person. Therefore, Stacy is a terrible person.
    a. Amphiboly.
    b. No fallacy.
    c. Suppressed evidence.
    d. Equivocation.
    e. Composition.

    ANS: D PTS: 2

36. When Edward turned the key in his new BMW this morning, the car wouldn't start. Thus, he should call a tow truck and have the car towed to the wrecking yard.
    a. False cause.
    b. Missing the point.
    c. Accident.
    d. No fallacy.
    e. Begging the question.

    ANS: B PTS: 2

37. Amy, since you know something about algebra, you can probably help me out with this. What is the value of x in the equation $x^2 + 3x = 22$?
    a. Appeal to unqualified authority.
    b. Appeal to ignorance.
    c. Begging the question.

d. Complex question.
e. No fallacy.

ANS: E PTS: 2

38. You shouldn't worry a minute about dropping these tabs of ecstasy. Absolutely everyone who is the least bit cool is doing it.
a. You, too (*tu quoque*).
b. Hasty generalization.
c. No fallacy.
d. Appeal to the people.
e. False dichotomy.

ANS: D PTS: 2

39. Willie the Weasel could not possibly be responsible for burglarizing the jewelry store. Willie is an inept bungler who couldn't steal a newspaper from a broken vending machine.
a. Argument against the person, circumstantial.
b. Appeal to the people.
c. Argument against the person, abusive.
d. Appeal to pity.
e. No fallacy.

ANS: E PTS: 2

40. Max argues that we should upgrade our firefighting equipment by purchasing a fleet of new trucks with all the bells and whistles. But it's only natural that he should argue this way. Max is a firefighter himself, and he just wants a fancy new truck to ride around in.
a. Appeal to unqualified authority.
b. Argument against the person, circumstantial.
c. Argument against the person, abusive.
d. Appeal to ignorance.
e. No fallacy.

ANS: B PTS: 2

Chapter 3 Test G

MULTIPLE CHOICE

INSTRUCTIONS: Select the best answer for each argument.

1. Clearly the moral standards of our youth have decayed. Two doctors at Central Hospital appeared recently on a talk show, and both were convinced that the youth of today have no morals at all.
   a. Argument against the person, abusive.
   b. Hasty generalization.
   c. Weak analogy.
   d. Appeal to unqualified authority.
   e. Missing the point.

   ANS: D PTS: 2

2. Smith, Adams, and Harris all outlived their wives, and their wives were younger than they were. It must be the case that men outlive women these days.
   a. False cause.
   b. Accident.
   c. Weak analogy.
   d. No fallacy.
   e. Hasty generalization.

   ANS: E PTS: 2

3. A spokesman for the government has argued that our insistence on a twelve percent increase in pay for steel workers is inflationary. But the government's own actions are far more inflationary than ours. The government just gave a fifteen percent increase to every single employee of the giant federal bureaucracy.
   a. *Tu quoque* (you, too).
   b. Argument against the person, circumstantial.
   c. Appeal to ignorance.
   d. Straw man.
   e. Hasty generalization.

   ANS: A PTS: 2

4. No fish are mammals. Therefore, no mammals are fish.
   a. Equivocation.
   b. Begging the question.
   c. No fallacy.
   d. Missing the point.
   e. Accident.

   ANS: C PTS: 2

5. Gold Medallion wine is the finest wine in the United States. This is true because it's preferred by more people of discriminating taste. Furthermore, we know that it's preferred by more people of discriminating taste because it's the finest wine in the United States.
   a. Suppressed evidence.
   b. Slippery slope.
   c. Missing the point.
   d. False cause.

e. Begging the question.

ANS: E PTS: 2

6. Twenty percent of the women attending Ponderosa College are beautiful. Since Charlotte attends Ponderosa College, it follows that twenty percent of her is beautiful.
   a. Hasty generalization.
   b. Division.
   c. Amphiboly.
   d. Composition.
   e. Accident.

   ANS: B PTS: 2

7. Aspirin is an analgesic drug, and it is appropriately purchased over the counter. Morphine, like aspirin, is an analgesic drug. Therefore, it would be appropriate that morphine be available over the counter.
   a. Weak analogy.
   b. Appeal to pity.
   c. Appeal to ignorance.
   d. No fallacy.
   e. Appeal to unqualified authority.

   ANS: A PTS: 2

8. You have been rather outspoken lately in your criticism of the administration; but I am sure that you will want to keep your mouth shut in the future, because several of those who have been critical in the past have now lost their jobs.
   a. *Tu quoque* (you, too).
   b. Argument against the person, abusive.
   c. Red herring.
   d. Complex question.
   e. Appeal to force.

   ANS: E PTS: 2

9. Dog owners have asked that they be allowed to bring their pets to the beach. This request will have to be denied. If dogs are allowed on the beach, then soon we will have horses and cows. Before long there will be sheep, goats, pigs, and chickens. All that potential food will attract the owners of jaguars, lions, and tigers. In the end, the beach will be a war zone.
   a. False dichotomy.
   b. Suppressed evidence.
   c. Begging the question.
   d. Slippery slope.
   e. Composition.

   ANS: D PTS: 2

10. Every patch in this patchwork quilt is some shade of green. Therefore, the entire quilt is green.
    a. Division.
    b. No fallacy.
    c. Accident.
    d. Composition.
    e. False cause.

    ANS: B PTS: 2

11. Either you send Hallmark cards or you don't care enough to send the very best. Surely you care enough to send the very best. Therefore, you will want to send Hallmark cards.
    a. False dichotomy.
    b. No fallacy.
    c. Amphiboly.
    d. Equivocation.
    e. Complex question.

    ANS: A PTS: 2

12. Dr. Harrison has argued that the open position in the mathematics department should be given to Dr. George. But Harrison's arguments should be discounted since Harrison and George are good friends.
    a. Weak analogy.
    b. Argument against the person, abusive.
    c. Red herring.
    d. Straw man.
    e. Argument against the person, circumstantial.

    ANS: E PTS: 2

13. Oak trees are shady. Shady things are not to be trusted. Therefore, oak trees are not to be trusted.
    a. Amphiboly.
    b. False cause.
    c. Missing the point.
    d. Begging the question.
    e. Equivocation.

    ANS: E PTS: 2

14. Mr. Fuller, who is running for the U.S. Senate, was seriously wounded during the last war. Therefore, it is certain that he would make a great senator.
    a. Argument against the person, circumstantial.
    b. False dichotomy.
    c. Weak analogy.
    d. Missing the point.
    e. Red herring.

    ANS: D PTS: 2

15. Stealing is wrong. Therefore, it would be wrong for me to steal the spark plug wires from that getaway car while the driver is busy robbing the First National Bank.
    a. Hasty generalization.
    b. Accident.
    c. Appeal to pity.
    d. Division.
    e. Weak analogy.

    ANS: B PTS: 2

16. Nobody has ever seen Mr. Fearnside drive a car. He does own a car, though, but his wife is the only one to drive it. Therefore, probably Mr. Fearnside doesn't drive.
    a. Begging the question.
    b. Suppressed evidence.
    c. No fallacy.
    d. Complex question.

e. Appeal to ignorance.

ANS: C PTS: 2

17. The Surgeon General recently issued a report arguing that one third of the cancer fatalities in the United States can be attributed to smoking. But this claim is ridiculous. Smoking produces a great deal of enjoyment for millions of Americans. What would life be like if you can't enjoy something once in a while?
a. Slippery slope.
b. Red herring.
c. Appeal to unqualified authority.
d. Complex question.
e. No fallacy.

ANS: B PTS: 2

18. Steve, I know that you've never been in a serious accident, but do you still drive your car like a madman?
a. Complex question.
b. Accident.
c. Argument against the person, abusive.
d. No fallacy.
e. *Tu quoque* (you, too).

ANS: A PTS: 2

19. Most elderly people who are hospitalized with cancer eventually die from the disease. Thus, if an elderly person wants to recover from cancer he or she must, at all costs, refuse hospitalization.
a. Appeal to ignorance.
b. Appeal to the people.
c. Accident.
d. False cause.
e. Hasty generalization.

ANS: D PTS: 2

20. Sparky the Weasel is clearly unqualified to operate the Paradise Day Care Center for young children. A few years ago Sparky was convicted of fifteen counts of child molestation and statutory rape.
a. Appeal to the people.
b. Begging the question.
c. Argument against the person, abusive.
d. Argument against the person, circumstantial.
e. No fallacy.

ANS: E PTS: 2

21. You have heard Congressman Doyle's arguments in favor of reduced military expenditures. But surely you won't take them seriously. Doyle, as you know, is an admitted alcoholic, and rumor has it that he abuses his wife and children.
a. Argument against the person, abusive.
b. Argument against the person, circumstantial.
c. Straw man.
d. Missing the point.
e. No fallacy.

ANS: A PTS: 2

22. Each word in Lincoln's "Gettysburg Address" is very ordinary. Therefore, the "Gettysburg Address" must be a very ordinary speech.
    a. No fallacy.
    b. Appeal to the people.
    c. Composition.
    d. Division.
    e. Hasty generalization.

    ANS: C PTS: 2

23. The Court Reporter said that after the jurors had heard the testimony of the convicts they were returned to their cells for the night. One can only conclude that the jurors' rights have been violated, since jurors are not supposed to be locked up in cells.
    a. Amphiboly.
    b. Equivocation.
    c. Appeal to force.
    d. Appeal to pity.
    e. Appeal to unqualified authority.

    ANS: A PTS: 2

24. Karen bought a new red Chevy Camaro, and she says she gets great gas mileage. Tony, who has the same driving habits as Karen, also bought a new Camaro—a yellow one, but with the same size engine and transmission. Probably he gets great gas mileage too.
    a. Accident.
    b. No fallacy.
    c. Begging the question.
    d. Weak analogy.
    e. Composition.

    ANS: B PTS: 2

25. More people in America drink Budweiser than any other beer. Clearly, then, if you drink beer, you should drink Bud.
    a. Appeal to ignorance.
    b. Hasty generalization.
    c. Weak analogy.
    d. No fallacy.
    e. Appeal to the people.

    ANS: E PTS: 2

26. No one has ever proved that smoking small amounts of marijuana over long periods of time is harmful. We can therefore conclude that this practice is completely safe.
    a. Red herring.
    b. False cause.
    c. No fallacy.
    d. Appeal to ignorance.
    e. Slippery slope.

    ANS: D PTS: 2

27. During the past two thousand years, no human being has ever set foot on Mars. Therefore, it is unlikely that any human being will set foot on Mars during the next two thousand years.

a. Accident.
b. Suppressed evidence.
c. Hasty generalization.
d. Composition.
e. Appeal to ignorance.

ANS: B PTS: 2

28. Mr. Jones, surely you will find me qualified for the open position in your accounting department. I provide the sole support for my aged mother, who is crippled with arthritis, and if I don't get a job soon I know I'll have a nervous breakdown.
a. Appeal to ignorance.
b. Missing the point.
c. Appeal to pity.
d. Appeal to ignorance.
e. No fallacy.

ANS: C PTS: 2

29. The use of contraceptives is immoral, because anything that violates nature is immoral.
a. Begging the question.
b. Complex question.
c. Appeal to the people.
d. Weak analogy.
e. No fallacy.

ANS: A PTS: 2

30. Smooth, round stones apparently have the power to cure the flu. The last time Harriet got the flu, she put 10 smooth, round stones in her left pocket, and each day she transferred one of them to her right pocket. After all the stones were transferred, the flu was gone! Many others have tried this cure, and it has worked every time.
a. Hasty generalization.
b. Red herring.
c. False cause.
d. Missing the point.
e. Appeal to unqualified authority.

ANS: C PTS: 2

31. Ladies and gentlemen, the minds of our children are in jeopardy. Today a reckless band of heathen teachers is shoving Darwinism down our children's throats. This ridiculous theory holds that human beings, the children of God, developed from mere monkeys. It holds that blind accident accounts for all life. Down with this godless theory! Fire the heathen teachers! Return God to the classroom!
a. Red herring.
b. Appeal to the people.
c. Appeal to force.
d. Missing the point.
e. Appeal to ignorance.

ANS: B PTS: 2

32. Mr. Rankin has just given his argument against affirmative action for women. It seems what he is saying is that women should stay out of the work place altogether. Just keep them barefoot and pregnant. That's what Rankin wants. Well, I think we are all smart enough to reject that argument.

a. Argument against the person, abusive.
b. Argument against the person, circumstantial.
c. Red herring.
d. Missing the point.
e. Straw man.

ANS: E PTS: 2

INSTRUCTIONS: Select the correct answer for each question.

33. The fallacy in which the arguer attempts to create a mob mentality is:
a. Appeal to authority.
b. Appeal to the people.
c. Amphiboly.
d. False cause.
e. Argument against the person.

ANS: B PTS: 2

34. In which of the following statements is an attribute predicated distributively?
a. Lemons are sour.
b. Cancer fatalities are increasing.
c. Model T Fords are disappearing.
d. Stars are numerous.
e. Bank robberies are frequent.

ANS: A PTS: 2

35. The fallacy in which the arguer attempts to lead the reader or listener off the track is:
a. False cause.
b. Division.
c. Red herring.
d. Argument against the person.
e. Amphiboly.

ANS: C PTS: 2

36. A fallacy that can be detected through mere inspection of the form of an argument is:
a. An informal fallacy.
b. A fallacy of weak induction.
c. A fallacy of relevance.
d. A fallacy of ambiguity.
e. A formal fallacy.

ANS: E PTS: 2

37. The fallacy in which an arguer attempts to discredit an argument by making its author appear as a hypocrite is:
a. *Ad hominem* circumstantial.
b. *Ad hominem* abusive.
c. Red herring.
d. *Tu quoque* (you, too).
e. Straw man.

ANS: D PTS: 2

38. Which of the following is *not* mentioned in the text as leading to the commission of informal fallacies?
    a. A careless mental posture.
    b. An emotional disposition favoring or opposing something.
    c. A failure to distinguish appearance from reality.
    d. Presuppositions in the arguer's worldview.
    e. The intentions of the arguer.

    ANS: C PTS: 2

39. The *non causa pro causa* variety of the false cause fallacy is committed whenever the arguer:
    a. concludes that just because X happens before Y, X causes Y.
    b. concludes that just because X and Y occur over the same interval of time, X causes Y.
    c. concludes that an apparent cause is not really a cause.
    d. proceeds from cause to effect.
    e. concludes that one of several causes is the sole cause.

    ANS: B PTS: 2

40. If a defense attorney in an American or Canadian criminal trial argues that because the prosecutor has proved nothing beyond a reasonable doubt about the guilt of the defendant, the defendant is innocent, then the defense attorney commits:
    a. An appeal to ignorance.
    b. A false cause.
    c. No fallacy.
    d. A hasty generalization.
    e. A missing the point.

    ANS: C PTS: 2

Chapter 3 Test H

MULTIPLE CHOICE

INSTRUCTIONS: Select the best answer for each argument.

1. The first rule of good behavior is always be yourself. Therefore, professional actors, who adopt the role of someone other than themselves, are behaving improperly.
   a. No fallacy.
   b. Begging the question.
   c. *Tu quoque* (you, too).
   d. Weak analogy.
   e. Accident.

   ANS: E PTS: 2

2. Movie star Glitzy Glamour says in magazine ads that Sparkle cosmetics are fabulous. Given Glitzy's incredible popularity, we must conclude that Sparkle cosmetics are indeed fabulous, just as she says.
   a. No fallacy.
   b. Missing the point.
   c. Appeal to the people.
   d. Appeal to unqualified authority.
   e. Appeal to ignorance.

   ANS: D PTS: 2

3. United States Marshals are allowed to carry loaded guns in the courtroom. But attorneys are officers of the court, no less than U.S. Marshals. Therefore, attorneys are allowed to carry loaded guns in the courtroom.
   a. Weak analogy.
   b. No fallacy.
   c. Appeal to unqualified authority.
   d. Hasty generalization.
   e. Equivocation.

   ANS: A PTS: 2

4. After getting settled in your new job, you will want to buy a home in the Woodland district. Woodland is true prestige, and all of our upscale employees live there.
   a. Argument against the person, circumstantial.
   b. No fallacy.
   c. Appeal to the people.
   d. Red herring.
   e. Appeal to force.

   ANS: C PTS: 2

5. It would not be a good idea to hire Mr. Larson as a bus driver for the school district. Larson has huge cataracts in both eyes, and he hates children.
   a. Argument against the person, abusive.
   b. No fallacy.
   c. *Tu quoque* (you, too).
   d. False cause.
   e. Division.

ANS: B PTS: 2

6. Either you enlist in the Marine Corps or you'll be a baby for the rest of your life. The choice is yours.
   a. Composition.
   b. Appeal to force.
   c. Suppressed evidence.
   d. False dichotomy.
   e. No fallacy.

   ANS: D PTS: 2

7. People don't have to go to college to make a lot of money. Look at Richard Branson, Chairman of the Virgin Group. He's a billionaire, yet he was a terrible student, and he dropped out of school when he was sixteen.
   a. False dichotomy.
   b. Hasty generalization.
   c. Argument against the person, circumstantial.
   d. No fallacy.
   e. Weak analogy.

   ANS: B PTS: 2

8. Lake Michigan contains fish. Therefore, every cubic foot of lake Michigan contains fish.
   a. Division.
   b. Accident.
   c. No fallacy.
   d. Composition.
   e. Missing the point.

   ANS: A PTS: 2

9. None of Mr. Konrad's friends has ever seen him smoke a cigarette, cigar, or pipe. Therefore, probably Mr. Konrad is a nonsmoker.
   a. Appeal to ignorance.
   b. Complex question.
   c. No fallacy.
   d. Appeal to unqualified authority.
   e. Straw man.

   ANS: C PTS: 2

10. Betty's argument for universal health care is ridiculous. Betty dropped out of school after the seventh grade, and the most responsible job she has ever held is working as a clerk in a grocery store.
    a. Appeal to unqualified authority.
    b. Hasty generalization.
    c. No fallacy.
    d. Argument against the person, circumstantial.
    e. Argument against the person, abusive.

    ANS: E PTS: 2

11. The last three times I invested money in the stock market, stock prices declined. Therefore, to prevent further declines, I must stop investing any more money.
    a. Missing the point.
    b. No fallacy.

c. Straw man.
d. False cause.
e. Amphiboly.

ANS: D PTS: 2

12. Frank argues that it's not a good idea for underage people to drink alcoholic beverages. Apparently Frank wants everyone to be a teetotaler. Bring back prohibition for good—that's what Frank wants. But prohibition was a complete failure in the thirties. Obviously Frank's argument is misguided.
a. Accident.
b. Begging the question.
c. No fallacy.
d. Hasty generalization.
e. Straw man.

ANS: E PTS: 2

13. Bill, I saw you at the party the other night. You were with a beautiful redhead. Level with me, are you still cheating on your wife?
a. Begging the question.
b. *Tu quoque* (you, too).
c. Complex question.
d. Division.
e. No fallacy.

ANS: C PTS: 2

14. Jason is a terrible chess player. But every chess player is a human being. Therefore, Jason is a terrible human being.
a. Division.
b. Equivocation.
c. Amphiboly.
d. No fallacy.
e. Argument against the person, abusive.

ANS: B PTS: 2

15. Every thread in this shirt is pure silk. Therefore, this shirt is pure silk.
a. No fallacy.
b. Division.
c. Accident.
d. Composition.
e. Weak analogy.

ANS: A PTS: 2

16. The FBI and the CIA failed to prevent the terrorist attack on the World Trade Center. Therefore, these government agencies should be abolished immediately.
a. Missing the point.
b. Red herring.
c. False cause.
d. No fallacy.
e. Hasty generalization.

ANS: A PTS: 2

17. Stem cell research is clearly immoral because any activity that destroys human beings is immoral.
    a. Complex question.
    b. Appeal to the people.
    c. No fallacy.
    d. Appeal to ignorance.
    e. Begging the question.

    ANS: E PTS: 2

18. Barbara argues that we should develop fuel cell cars that run more efficiently with less pollution. But look at what Barbara drives. It's one of those gas guzzling SUVs that pollute like a steam locomotive. Obviously Barbara's argument is worthless.
    a. No fallacy.
    b. Missing the point.
    c. Appeal to unqualified authority.
    d. *Tu quoque* (you, too).
    e. Argument against the person, circumstantial.

    ANS: D PTS: 2

19. During the four years that Allison has been president of the Westridge Retirement Club, five members have contracted diabetes. Therefore, to prevent any more cases of this disease we must elect a new president immediately.
    a. Begging the question.
    b. False cause.
    c. Accident.
    d. Slippery slope.
    e. No fallacy.

    ANS: B PTS: 2

20. During the past two hundred years no one has been cured of Alzheimer's disease. Therefore, it is unlikely that anyone will be cured in the next two hundred years.
    a. Equivocation.
    b. Amphiboly.
    c. Suppressed evidence.
    d. No fallacy.
    e. Appeal to pity.

    ANS: C PTS: 2

21. Members of the jury, surely defendant Jones is not guilty of kidnapping the little girl. Jones loves children dearly, and during the first ten years of his marriage he prayed every day for a child. Finally, his wife gave birth to a little boy, but then she and the boy were killed in a car accident.
    a. Slippery slope.
    b. No fallacy.
    c. Appeal to pity.
    d. Appeal to the people.
    e. Appeal to force.

    ANS: C PTS: 2

22. New York is located in the United States. Therefore, native born New Yorkers are native born Americans.
    a. Begging the question.

b. Weak analogy.
c. Composition.
d. No fallacy.
e. Missing the point.

ANS: D PTS: 2

23. George argues that prize fighting should be outlawed. But many prize fighters have been great athletes—Muhammad Ali, Lennox Lewis, Rocky Marciano, and Joe Louis, to name just a few. Clearly George is mistaken.
a. No fallacy.
b. Red herring.
c. Appeal to unqualified authority.
d. False cause.
e. Straw man.

ANS: B PTS: 2

24. Michelle said she saw a man get run over by a car while standing on her porch. We can only conclude that her porch was severely damaged.
a. False dichotomy.
b. Straw man.
c. No fallacy.
d. Equivocation.
e. Amphiboly.

ANS: E PTS: 2

25. Nobody has ever proved that the prophecies of Nostradamus are false. Therefore, they must be true.
a. Argument against the person, circumstantial.
b. *Tu quoque* (you, too).
c. Missing the point.
d. Appeal to ignorance.
e. No fallacy.

ANS: D PTS: 2

26. Religious fanatics are basically crazy because they are deluded. Of course they are deluded because they believe nonsense. And they believe nonsense because they are hopelessly narrow minded. Naturally they are hopelessly narrow minded because they are basically crazy.
a. Begging the question.
b. Red herring.
c. No fallacy.
d. Straw man.
e. Slippery slope.

ANS: A PTS: 2

27. Maria's argument for abolishing the Immigration Service can't be trusted. After all, Maria is an illegal alien, and if the Immigration Service is abolished, she will never be caught and deported.
a. Straw man.
b. Argument against the person, circumstantial.
c. Missing the point.
d. *Tu quoque* (you, too).
e. No fallacy.

ANS: B PTS: 2

28. Professor Stevens, the great English scholar, says that Chaucer's *Canterbury Tales* represents a milestone in the development of the English language. Therefore, the *Canterbury Tales* must indeed be a milestone, just as he says.
    a. Appeal to force.
    b. No fallacy.
    c. Amphiboly.
    d. Appeal to unqualified authority.
    e. False cause.

    ANS: B PTS: 2

29. It would be a mistake to provide new gloves to the school's baseball players. In no time the football players will want new equipment. Then the tennis players will want new courts, the hockey players will want a new arena, the swimmers will want a new pool, and the golfers will want their own special course. The costs for these facilities will go through the roof.
    a. Composition.
    b. Equivocation.
    c. Accident.
    d. Slippery slope.
    e. No fallacy.

    ANS: D PTS: 2

30. George likes chocolate truffles, and he also likes Tabasco sauce. Therefore he would certainly like some chocolate truffles topped with Tabasco sauce.
    a. Accident.
    b. Appeal to pity.
    c. Hasty generalization.
    d. Begging the question.
    e. Composition.

    ANS: E PTS: 2

31. Professor Smith, of course you agree that all of us deserve an excellent grade in this class. Because if you don't, you'll get rotten evaluations at the end of the semester, and as a result, you may be denied tenure.
    a. Complex question.
    b. Division.
    c. Appeal to pity.
    d. Appeal to force.
    e. No fallacy.

    ANS: C PTS: 2

INSTRUCTIONS: Select the correct answer for each question.

32. Which of the following statements involves the collective predication of an attribute?
    a. Sunflowers are yellow.
    b. Fire trucks are noisy.
    c. Wine is alcoholic.
    d. Solar eclipses are infrequent.
    e. Germany is in northern Europe.

ANS: D PTS: 2

33. The gambler's fallacy is a variety of:
    a. Accident.
    b. False cause.
    c. Slippery slope.
    d. Suppressed evidence.
    e. False dichotomy.

    ANS: B PTS: 2

34. Given the argument, "All cats are animals, and some animals are mammals; thus, some cats are mammals." This argument:
    a. Contains an informal fallacy.
    b. Is strong.
    c. Contains a formal fallacy.
    d. Contains a disjunctive fallacy.
    e. Is valid.

    ANS: C PTS: 2

35. Which of the following is presented as a factor leading to the commission of fallacies?
    a. The arguer's desire to feel superior.
    b. An anti-logical disposition in the mind of the arguer.
    c. A lack of formal education.
    d. A genetic defect in the arguer.
    e. Presuppositions in the arguer's worldview.

    ANS: E PTS: 2

36. Which of the following fallacies involves distributive predication in the conclusion of an argument?
    a. Hasty generalization.
    b. Division.
    c. Accident.
    d. Composition.
    e. False cause.

    ANS: A PTS: 2

37. Which of the following fallacies arises from a statement made by someone other than the arguer?
    a. Equivocation.
    b. Argument against the person, circumstantial.
    c. Amphiboly.
    d. Appeal to force.
    e. Appeal to the people.

    ANS: C PTS: 2

38. Which of the following fallacies always involves two arguers?
    a. Complex question.
    b. Argument against the person.
    c. Red herring.
    d. Appeal to unqualified authority.
    e. Begging the question.

    ANS: B PTS: 2

39. A fallacy that can be detected by merely examining the form of an argument is:
    a. A fallacy of presumption.
    b. An informal fallacy.
    c. A fallacy of relevance.
    d. A fallacy of weak induction.
    e. A formal fallacy.

    ANS: E PTS: 2

40. The bandwagon argument is a variety of:
    a. False cause.
    b. Missing the point.
    c. Appeal to ignorance.
    d. Appeal to the people.
    e. Red herring.

    ANS: D PTS: 2

Chapter 3 Test I

MULTIPLE CHOICE

INSTRUCTIONS: Select the best answer for each argument.

1. Even though Jackie is not very bright, she always gets good grades. Therefore, she couldn't possibly have cheated on the last test.
   a. Accident.
   b. *Tu quoque* (you, too).
   c. Red herring.
   d. Missing the point.
   e. No fallacy.

   ANS: D PTS: 2

2. Bertha argues that vitamins and special food supplements are a waste of money. But only yesterday Bertha was seen in a health food store, and her friends report that she takes vitamins every day. Obviously Bertha's argument is crazy.
   a. *Tu quoque* (you, too).
   b. No fallacy.
   c. Argument against the person, abusive.
   d. Appeal to unqualified authority.
   e. Weak analogy.

   ANS: A PTS: 2

3. Ginger, I saw you outside the opera house the other night. Tell me, why don't you enjoy ordinary musical events, like normal people do?
   a. Begging the question.
   b. Argument against the person, circumstantial.
   c. Appeal to ignorance.
   d. No fallacy.
   e. Complex question.

   ANS: E PTS: 2

4. Republicans are clearly better able to run the country because they're more experienced in handling money.
   a. Slippery slope.
   b. Hasty generalization.
   c. Begging the question.
   d. Missing the point.
   e. No fallacy.

   ANS: C PTS: 2

5. Jackson and Sean are sixteen-year-olds with similar interests. Jackson loves the latest NCAA video game. Therefore, probably Sean would love it, too.
   a. Weak analogy.
   b. False cause.
   c. No fallacy.
   d. Division.
   e. Accident.

ANS: C PTS: 2

6. Senator Smith, I know you will support the oil drilling bill before the committee, because if you don't, I'll make a huge contribution to your opponent in the next election.
   a. Red herring.
   b. Appeal to force.
   c. No fallacy.
   d. Straw man.
   e. Argument against the person, abusive.

   ANS: B PTS: 2

7. Paul Derrick, president of Big Tex Oil Co., says that we should open up all coastal waters of the U.S. to oil drilling. He promises that not a speck of pollution will result. Given Derrick's expertise in these matters, it follows that we should open up these waters immediately.
   a. False cause.
   b. Begging the question.
   c. Argument against the person, circumstantial.
   d. Appeal to unqualified authority.
   e. No fallacy.

   ANS: D PTS: 2

8. This carton contains heavy cream. Therefore, it weighs more than that identically sized carton of ordinary cream.
   a. Accident.
   b. Equivocation.
   c. Amphiboly.
   d. No fallacy.
   e. Composition.

   ANS: B PTS: 2

9. Ferguson's argument in favor of deregulating the banking system isn't worth a hoot. Consider this: Ferguson is a banker himself, and if banks are deregulated, he will earn millions.
   a. Red herring.
   b. No fallacy.
   c. Straw man.
   d. *Tu quoque* (you, too).
   e. Argument against the person, circumstantial.

   ANS: E PTS: 2

10. Frances, since you studied chemistry last year, you should know the answer to this. Is calcium a metal or a nonmetal?
    a. False dichotomy.
    b. Appeal to unqualified authority.
    c. No fallacy.
    d. Complex question.
    e. Begging the question.

    ANS: C PTS: 2

11. For the past several years, every time that Ruben has suffered a bout of sneezing, he has come down with a cold. Therefore, to prevent colds in the future, Ruben must constantly suppress the urge to sneeze.
    a. False cause.
    b. Equivocation.
    c. Slippery slope.
    d. Suppressed evidence.
    e. No fallacy.

    ANS: A PTS: 2

12. People have the right to use their own property as they choose. Therefore, since Julian is the sole owner of this plot of land, he can use it as a site for a hydrogen bomb factory.
    a. Division.
    b. Missing the point.
    c. No fallacy.
    d. Accident.
    e. Hasty generalization.

    ANS: D PTS: 2

13. We don't dare allow the public school teachers to have another week of summer vacation. If we do, then the police will want the same thing. Then it will be the firemen, park rangers, highway patrol, social service workers, highway personnel, and motor vehicle workers. In the end, everyone will be working less for the same amount of money.
    a. Slippery slope.
    b. No fallacy.
    c. Argument against the person, abusive.
    d. Weak analogy.
    e. Red herring.

    ANS: A PTS: 2

14. Never in the past two hundred years have tourists been able to book a flight to the moon. Therefore, it is unlikely that tourists will be able to book a flight to the moon in the next two hundred years.
    a. Accident.
    b. Hasty generalization.
    c. No fallacy.
    d. Composition.
    e. Suppressed evidence.

    ANS: E PTS: 2

15. This custard pudding is sweet. Therefore, every spoonful of this custard pudding is sweet.
    a. False cause.
    b. No fallacy.
    c. Division.
    d. Appeal to ignorance.
    e. Composition.

    ANS: B PTS: 2

16. Adrian argues that it should be illegal for private individuals to carry concealed weapons. Obviously Adrian wants to abolish gun ownership altogether. Just go out and confiscate all the guns. That's what Adrian wants. Well, the Second Amendment gives us the right to bear arms, so Adrian's argument is ridiculous.
    a. Red herring.
    b. Appeal to pity.
    c. Straw man.
    d. No fallacy.
    e. Argument against the person, abusive.

    ANS: C PTS: 2

17. Nobody has ever proved that Ouija boards can't be used to predict the future. It therefore follows that they can be used for this purpose.
    a. Hasty generalization.
    b. Missing the point.
    c. Appeal to unqualified authority.
    d. No fallacy.
    e. Appeal to ignorance.

    ANS: E PTS: 2

18. Fred's argument in favor of lowering the gasoline tax is totally absurd. Fred is a complete loser who has never held a responsible job, and in his darker moments he abuses animals and torments small children.
    a. Begging the question.
    b. No fallacy.
    c. Suppressed evidence.
    d. Argument against the person, abusive.
    e. False dichotomy.

    ANS: D PTS: 2

19. Tim has lost money at the roulette wheel for the last five nights. Therefore, it is extremely likely that he will win tonight.
    a. Slippery slope.
    b. False cause.
    c. No fallacy.
    d. Complex question.
    e. Weak analogy.

    ANS: B PTS: 2

20. Ted argues that CEOs should be prevented from selling stock they own in their own companies for ten years. But did you hear that Ted recently broke up with his girlfriend? They carried on a torrid affair for two years, and when she got pregnant, he dumped her. Enough of that. Let's move on to something important.
    a. Red herring.
    b. *Tu quoque* (you, too).
    c. No fallacy.
    d. Straw man.
    e. Accident.

    ANS: A PTS: 2

21. Professional sports figures are not the clean, upright types people take them to be. Just look at Tiger Woods. He betrayed his lovely wife by engaging in extramarital affairs with several different women.
    a. Weak analogy.
    b. No fallacy.
    c. Hasty generalization.
    d. Composition.
    e. Accident.

    ANS: C PTS: 2

22. Either you pay my tuition to Stanford or I'll be doomed to a life of mediocrity. I'm sure you don't want that.
    a. Appeal to the people.
    b. Appeal to ignorance.
    c. No fallacy.
    d. Appeal to unqualified authority.
    e. False dichotomy.

    ANS: E PTS: 2

23. A person of your status will surely want to buy a Lexus. Owning a Lexus is the ultimate expression of cultural refinement, exquisite taste, and financial success.
    a. Appeal to ignorance.
    b. Red herring.
    c. Straw man.
    d. Appeal to the people.
    e. No fallacy.

    ANS: D PTS: 2

24. Professor Friedman, the great constitutional scholar, says that the First Amendment is the most important part of the Bill of Rights. We therefore conclude that the First Amendment is indeed the most important part of the Bill of Rights.
    a. Amphiboly.
    b. No fallacy.
    c. Appeal to unqualified authority.
    d. Equivocation.
    e. Argument against the person, circumstantial.

    ANS: B PTS: 2

25. It is permissible for physicians to write prescriptions for drugs. But chiropractors are health care professionals no less than physicians. Therefore, it should be permissible for chiropractors to write prescriptions for drugs.
    a. False cause.
    b. Complex question.
    c. No fallacy.
    d. Weak analogy.
    e. Hasty generalization.

    ANS: D PTS: 2

26. Protons are not combustible, and neither are electrons. It therefore follows that hydrogen, which is composed of protons and electrons, is not combustible.
    a. Composition.

b. Weak analogy.
c. Division.
d. No fallacy.
e. Missing the point.

ANS: A PTS: 2

27. Rich people tend to be snobs because they have materialistic values. Of course they have materialistic values because they fail to appreciate true human qualities. And why do they do this? Because they are condescending and haughty. Naturally they are condescending and haughty because they tend to be snobs.
a. Appeal to ignorance.
b. No fallacy.
c. Begging the question.
d. False cause.
e. Accident.

ANS: C PTS: 2

28. Surely little Jimmy isn't responsible for burning down the school. A year ago, Jimmy's dad, whom Jimmy loved dearly, was killed in an accident, and ever since that time Jimmy has collected aluminum cans and mowed lawns to help his poor mother raise his six brothers and sisters.
a. Accident.
b. Division.
c. Appeal to pity.
d. Appeal to force.
e. Equivocation.

ANS: C PTS: 2

29. Either Jane Austen was English or she was American. Since Jane Austen was not American, it follows that she was English.
a. Begging the question.
b. No fallacy.
c. False dichotomy.
d. Suppressed evidence.
e. Accident.

ANS: B PTS: 2

30. Andrew said he petted his dog reading a newspaper. Andrew must have a very intelligent dog.
a. No fallacy.
b. Appeal to ignorance.
c. Equivocation.
d. Amphiboly.
e. False cause.

ANS: D PTS: 2

31. "Greensleeves" is a lovely tune. Therefore, every note of "Greensleeves" is a lovely tune.
a. Division.
b. Accident.
c. Composition.
d. Weak analogy.
e. No fallacy.

ANS: A PTS: 2

INSTRUCTIONS: Select the correct answer for each question.

32. The distributive predication of an attribute is found in:
    a. Disjunctive statements.
    b. Conditional statements.
    c. Class statements.
    d. General statements.
    e. Presumptive statements.

    ANS: D PTS: 2

33. What fallacy often involves collective predication in the premise of an argument?
    a. False cause.
    b. Accident.
    c. Composition.
    d. Hasty generalization.
    e. Division.

    ANS: E PTS: 2

34. Given the argument, "If the sky is clear, then the stars are visible. The stars are visible. Therefore, the sky is clear." This argument is an example of:
    a. A sound argument.
    b. A formal fallacy.
    c. A valid argument.
    d. A fallacy of presumption.
    e. An informal fallacy.

    ANS: B PTS: 2

35. Which of the following is presented as a factor leading to the commission of informal fallacies?
    a. The arguer's irrational quest for power.
    b. The defective worldview of the arguer.
    c. A genetic predisposition to illogical reasoning.
    d. Misfiring synapses in the brain of the arguer.
    e. The intent of the arguer.

    ANS: E PTS: 2

36. Which of the following fallacies always involves two arguers?
    a. Red herring.
    b. Complex question.
    c. Straw man.
    d. Slippery slope.
    e. Begging the question.

    ANS: C PTS: 2

37. The appeal to snobbery is a variety of:
    a. Appeal to the people.
    b. Argument against the person.
    c. Appeal to force.
    d. Red herring.

e. Appeal to pity.

ANS: A PTS: 2

38. Which of the following fallacies occurs in a valid argument?
a. Missing the point.
b. False cause.
c. Begging the question.
d. Accident.
e. Appeal to ignorance.

ANS: C PTS: 2

39. Which fallacy occurs when a general rule is applied to a specific case that the rule was not intended to cover?
a. Hasty generalization.
b. *Tu quoque* (you, too).
c. Composition.
d. Accident.
e. Division.

ANS: D PTS: 2

40. Which fallacy involves a chain reaction of causes?
a. Begging the question.
b. Slippery slope.
c. Weak analogy.
d. Equivocation.
e. False dichotomy.

ANS: B PTS: 2

Chapter 4 Test A

MULTIPLE CHOICE

Categorical Proposition 1A
Given the categorical proposition:
"All wiretaps that are approved without a warrant are surveillance techniques that are not legal."

1. In Categorical Proposition 1A, the subject term is:
   a. Surveillance techniques that are not legal.
   b. Warrant.
   c. Surveillance techniques.
   d. Wiretaps.
   e. Wiretaps that are approved without a warrant.

   ANS: E PTS: 2

2. In Categorical Proposition 1A, the copula is:
   a. Are.
   b. Are not.
   c. All.
   d. Affirmative.
   e. Are not legal.

   ANS: A PTS: 2

3. In Categorical Proposition 1A, the quantifier is:
   a. Are.
   b. Particular.
   c. All.
   d. Universal.
   e. Are not.

   ANS: C PTS: 2

4. In Categorical Proposition 1A, the quality is:
   a. Not.
   b. Universal.
   c. Negative.
   d. Affirmative.
   e. Particular

   ANS: D PTS: 2

5. In Categorical Proposition 1A:
   a. The subject term is universal and the predicate term is particular.
   b. The subject term is distributed and the predicate term is undistributed.
   c. The subject term is undistributed and the predicate term is distributed.
   d. Both the subject term and the predicate term are distributed.
   e. Both the subject term and the predicate term are undistributed.

   ANS: B PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

6. Which of the following categorical propositions is in standard form?
   a. No mutual funds are completely without risk.
   b. No physicians are immune from making mistakes.
   c. Not every restaurant serves organic food.
   d. Some carwashes are solar powered operations.
   e. All sleep aids are not drugs without side effects.

   ANS: D PTS: 2

7. The proposition "No flight delays are occurrences welcomed by passengers" is an:
   a. **I**-type.
   b. **U**-type.
   c. **E**-type.
   d. **O**-type.
   e. **A**-type.

   ANS: C PTS: 2

8. Given the categorical proposition "Some teaching careers are not rewarding occupations." If the quality but not the quantity is changed, the resulting proposition is:
   a. Some teaching careers are rewarding occupations.
   b. All teaching careers are unrewarding occupations.
   c. No teaching careers are rewarding occupations.
   d. All teaching careers are rewarding occupations.
   e. Some teaching careers are unrewarding occupations.

   ANS: A PTS: 2

9. Given the categorical proposition "No corporations are real persons." If the quantity but not the quality is changed, the resulting proposition is:
   a. No real persons are corporations.
   b. Some corporations are not real persons.
   c. All corporations are real persons.
   d. Some corporations are real persons.
   e. No corporations are not real persons.

   ANS: B PTS: 2

10. Given the categorical proposition "All Emmy winners are celebrities." If both the quality and the quantity are changed, the resulting proposition is:
    a. No Emmy winners are people who are not celebrities.
    b. All people who are not celebrities are people who are not Emmy winners.
    c. No Emmy winners are celebrities.
    d. Some Emmy winners are celebrities.
    e. Some Emmy winners are not celebrities.

    ANS: E PTS: 2

    INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and an operation/relation to be performed on that statement. You must identify the new statement and the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

11. All A are B. (T) Contrary

a. No A are B. (Und.)
b. All B are A. (Und.)
c. Some A are B. (T)
d. No A are B. (F)
e. No A are non-B. (T)

ANS: D PTS: 2

12. Some A are non-B. (F) Obversion
a. Some A are not B. (F)
b. Some A are not non-B. (T)
c. Some A are B. (F)
d. No A are B. (F)
e. Some B are non-A. (Und.)

ANS: A PTS: 2

13. All non-A are B. (F) Subalternation
a. All non-B are A. (F)
b. No non-A are B. (Und.)
c. Some non-A are B. (F)
d. Some non-A are not B. (T)
e. Some non-A are B. (Und.)

ANS: E PTS: 2

14. No non-A are B. (T) Conversion
a. No non-B are A. (Und.)
b. No A are non-B. (T)
c. No B are non-A. (T)
d. All non-A are non-B. (T)
e. All non-A are B. (F)

ANS: C PTS: 2

15. Some A are not non-B. (F) Contradiction
a. Some A are non-B. (T)
b. All A are non-B. (T)
c. Some B are not non-A. (F)
d. Some A are non-B. (T)
e. Some A are B. (T)

ANS: B PTS: 2

16. All non-A are B. (T) Contraposition
a. All B are non-A. (Und.)
b. All non-B are A. (T)
c. All A are non-B. (T)
d. All non-B are A. (Und.)
e. All A are non-B. (Und.)

ANS: B PTS: 2

17. Some non-A are not B. (T) Subcontrary
a. Some non-A are B. (Und.)
b. No non-A are B. (Und.)

c. All non-A are B. (F)
d. Some A are B. (T)
e. Some non-B are not A. (T)

ANS: A PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and a new statement. You must determine how the new statement is related to the given statement and determine the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

18. Some A are not non-B. (T) Some A are B.
a. Contraposition. (T)
b. Conversion. (Und.)
c. Contradiction. (F)
d. Obversion. (T)
e. Subcontrary. (Und.)

ANS: D PTS: 2

19. Some A are B. (F) Some A are not B.
a. Subcontrary. (Und.)
b. Conversion. (F)
c. Contradiction. (T)
d. Conversion. (T)
e. Subcontrary. (T)

ANS: E PTS: 2

20. No non-A are non-B. (F) All non-A are non-B.
a. Contradiction. (T)
b. Obversion. (F)
c. Contrary. (Und.)
d. Contraposition. (Und.)
e. Subcontrary. (T)

ANS: C PTS: 2

21. Some non-A are non-B. (F) Some B are A.
a. Conversion. (T)
b. Contraposition. (Und.)
c. Conversion. (F)
d. Subcontrary. (T)
e. Contraposition. (F)

ANS: B PTS: 2

22. All non-A are B. (T) Some non-A are not B.
a. Contradiction. (F)
b. Contraposition. (T)
c. Subalternation. (T)
d. Conversion. (Und.)
e. Contrary. (Und.)

ANS: A PTS: 2

23. Some A are non-B. (T) Some non-B are A.
    a. Contraposition. (Und.)
    b. Contrary. (F)
    c. Conversion. (T)
    d. Subalternation. (Und.)
    e. Contradiction. (F)

    ANS: C PTS: 2

24. Some non-A are not B. (F) No non-A are B.
    a. Subcontrary. (Und.)
    b. Subalternation. (F)
    c. Subcontrary. (T)
    d. Subalternation. (Und.)
    e. Contradiction. (T)

    ANS: B PTS: 2

    INSTRUCTIONS: Select the answer that best characterizes each immediate inference. Adopt the Aristotelian standpoint for these problems.

25. No mint juleps are sour concoctions. Therefore, no sour concoctions are mint juleps.
    a. Invalid, illicit subalternation.
    b. Invalid, illicit conversion.
    c. Invalid, illicit contrary.
    d. Invalid, illicit contraposition.
    e. Valid, no fallacy.

    ANS: E PTS: 2

26. It is false that no exercise machines are cumbersome devices. Therefore, all exercise machines are cumbersome devices.
    a. Invalid, existential fallacy.
    b. Invalid, illicit contrary.
    c. Invalid, illicit contraposition.
    d. Invalid, illicit subcontrary.
    e. Invalid, illicit subalternation.

    ANS: B PTS: 2

27. All werewolves are unwelcome companions. Therefore, no werewolves are welcome companions.
    a. Invalid, existential fallacy.
    b. Invalid, illicit subalternation.
    c. Valid, no fallacy.
    d. Invalid, illicit contrary.
    e. Invalid, illicit subcontrary.

    ANS: C PTS: 2

28. It is false that some identity crises are tranquil happenings. Therefore, some identity crises are not tranquil happenings.
    a. Valid, no fallacy.
    b. Invalid, illicit contrary.
    c. Invalid, illicit subalternation.
    d. Invalid, illicit conversion.

e. Invalid, illicit subcontrary.

ANS: A PTS: 2

29. Some student loans are not lifetime burdens. Therefore, some lifetime burdens are not student loans.
a. Valid, no fallacy.
b. Invalid, illicit contrary.
c. Invalid, illicit contraposition.
d. Invalid, illicit conversion.
e. Invalid, illicit subalternation.

ANS: D PTS: 2

30. It is false that some four-sided triangles are commonplace figures. Therefore, some four-sided triangles are not commonplace figures.
a. Valid, no fallacy.
b. Invalid, existential fallacy.
c. Invalid, illicit subcontrary.
d. Invalid, illicit contrary.
e. Invalid, illicit subalternation.

ANS: B PTS: 2

31. All advertisements are attempts to deceive. Therefore, it is false that no advertisements are attempts to deceive.
a. Invalid, illicit subcontrary.
b. Invalid, illicit contrary.
c. Invalid, illicit conversion.
d. Valid, no fallacy.
e. Invalid, existential fallacy.

ANS: D PTS: 2

32. No credit crunches are financial blessings. Therefore, some credit crunches are not financial blessings.
a. Invalid, illicit subcontrary.
b. Invalid, illicit subalternation.
c. Valid, no fallacy.
d. Invalid, illicit contrary.
e. Invalid, illicit conversion.

ANS: C PTS: 2

33. Some painkillers are not addictive medicines. Therefore, some painkillers are addictive medicines.
a. Valid, no fallacy.
b. Invalid, illicit subalternation.
c. Invalid, illicit contrary.
d. Invalid, illicit contraposition.
e. Invalid, illicit subcontrary.

ANS: E PTS: 2

34. Some happy endings are not unplanned outcomes. Therefore, some planned outcomes are not unhappy endings.
a. Valid, no fallacy.
b. Invalid, illicit conversion.
c. Invalid, illicit contraposition.

d. Invalid, illicit obversion.
e. Invalid, illicit subcontrary.

ANS: A PTS: 2

35. Some mistakes are not enduring tragedies. Therefore, no mistakes are enduring tragedies.
a. Invalid, illicit contrary.
b. Invalid, illicit subalternation.
c. Valid, no fallacy
d. Invalid, illicit contraposition.
e. Invalid, existential fallacy.

ANS: B PTS: 2

36. All married bachelors are polygamists. Therefore, it is false that some married bachelors are not polygamists.
a. Invalid, existential fallacy.
b. Invalid, illicit subcontrary.
c. Valid, no fallacy.
d. Invalid, illicit subalternation.
e. Invalid, illicit contrary.

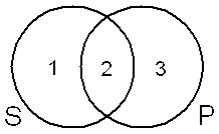
ANS: C PTS: 2

37. No expensive lawsuits are friendly exchanges. Therefore, no unfriendly exchanges are inexpensive lawsuits.
a. Invalid, illicit subalternation.
b. Valid, no fallacy.
c. Invalid, illicit conversion.
d. Invalid, illicit obversion.
e. Invalid, illicit contraposition.

ANS: E PTS: 2

INSTRUCTIONS: Fill in the Venn diagram for each statement.

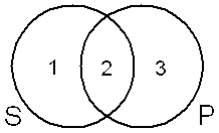
38. No S are P. (Boolean standpoint)



After filling in the Venn diagram,
a. Areas 1 and 3 are shaded.
b. There is an X in Area 1 and an X in Area 3.
c. There is an X in Area 2, and there are no other marks.
d. Area 2 is shaded, and there are no other marks.
e. Area 2 is shaded, and there is a circled X in Area 1.

ANS: D PTS: 2

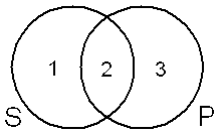
39. All S are P. (Aristotelian standpoint)



After filling in the Venn diagram,
a. Area 1 is shaded, and there is a circled X in Area 2.
b. Area 1 is shaded, and there are no other marks.
c. There is an X in Area 2, and there are no other marks.
d. Area 3 is shaded, and there is a circled X in Area 2.
e. Area 2 is shaded, and there is a circled X in Area 1.

ANS: A PTS: 2

40. Some S are not P. (Boolean standpoint)



After filling in the Venn diagram,
a. Area 1 is shaded, and there is an X in Area 2.
b. Area 1 is shaded, and there are no other marks.
c. There is an X in Area 1, and there are no other marks.
d. Areas 1 and 3 are shaded.
e. There is an X in Area 1 and in Area 2.

ANS: C PTS: 2

INSTRUCTIONS: Select the best translation for each categorical proposition.

41. Few students are truly dedicated.
a. Some students are not truly dedicated people.
b. Not all students are people who are truly dedicated.
c. Some students are truly dedicated people.
d. Some students are truly dedicated people, and some students are not truly dedicated people.
e. No students are truly dedicated people.

ANS: D PTS: 2

42. He says whatever comes to mind.
a. All things he says are things that come to mind.
b. Some things he says are things that come to mind.
c. No things that do not come to mind are things he says.
d. All persons identical to him say whatever comes to mind.
e. All things that come to mind are things he says.

ANS: E PTS: 2

43. There is a bed in the attic.
a. Some beds are not things in the attic.
b. Some beds are things in the attic.
c. All attics are things that contain a bed.

d. Some beds are in the attic.
e. Some beds are things in the attic and some beds are not things in the attic.

ANS: B PTS: 2

44. Marriages are not tolerable unless they are loving.
a. Some tolerable marriages are loving marriages.
b. All loving marriages are tolerable marriages.
c. All tolerable marriages are loving marriages.
d. All tolerable marriages are loving marriages, and all marriages that are not loving are marriages that are not tolerable.
e. No intolerable marriages are loving marriages.

ANS: C PTS: 2

45. Easter never occurs in February.
a. No times Easter occurs are times in February.
b. All times in February are not times Easter occurs.
c. All times Easter occurs are not times in February.
d. All times that are not February are times Easter occurs.
e. No Easters are in February.

ANS: A PTS: 2

46. All of the tools except the wrenches are rusted.
a. All tools that are not wrenches are tools that are rusted.
b. No wrenches are tools that are rusted.
c. Some wrenches are tools that are rusted and some wrenches are not tools that are rusted.
d. No wrenches are tools that are rusted, and all tools that are not wrenches are tools that are rusted.
e. All tools that are not rusted are wrenches.

ANS: D PTS: 2

47. Wherever there is water there is life.
a. All places there is life are places there is water.
b. All places there is no water are places there is no life.
c. All places there is water are places there is life.
d. All times there is water are times there is life.
e. Some places there is water are places there is life.

ANS: C PTS: 2

48. An eagle circled overhead.
a. Some eagles are birds that circled overhead.
b. Some eagles circled overhead.
c. All eagles are birds that circled overhead.
d. Some birds identical to eagles are birds that circled overhead.
e. All birds that circled overhead are eagles.

ANS: A PTS: 2

49. None but benefactors are philanthropists.
a. Some benefactors are not philanthropists.
b. All philanthropists are benefactors.
c. All people who are not philanthropists are people who are not benefactors.

d. No people who are not philanthropists are benefactors.
e. All benefactors are philanthropists.

ANS: B PTS: 2

50. Soft drinks are not alcoholic.
a. No things identical to soft drinks are things identical to alcoholic beverages.
b. Some soft drinks are not alcoholic beverages.
c. All soft drinks are not alcoholic beverages.
d. All soft drinks are nonalcoholic.
e. No soft drinks are alcoholic beverages.

ANS: E PTS: 2

Chapter 4 Test B

MULTIPLE CHOICE

Categorical Proposition 1B
Given the categorical proposition:
"Some forest fires that are not started by campers are conflagrations that are not easily extinguished."

1. In Categorical Proposition 1B, the predicate term is:
   a. Conflagrations that are not easily extinguished.
   b. Easily extinguished.
   c. Forest fires that are not started by campers.
   d. Conflagrations.
   e. Some.

   ANS: A PTS: 2

2. In Categorical Proposition 1B, the copula is:
   a. Some.
   b. Are not.
   c. Are.
   d. Forest fires.
   e. Conflagrations.

   ANS: C PTS: 2

3. In Categorical Proposition 1B, the quantity is:
   a. Some.
   b. Affirmative.
   c. Universal.
   d. Particular.
   e. Negative.

   ANS: D PTS: 2

4. In Categorical Proposition 1B, the quality is:
   a. Particular.
   b. Affirmative.
   c. Negative.
   d. Undistributed
   e. Universal.

   ANS: B PTS: 2

5. In Categorical Proposition 1B:
   a. Both the subject term and the predicate term are distributed.
   b. The subject term is distributed and the predicate term is undistributed.
   c. The subject term is universal and the predicate term is particular.
   d. The subject term is undistributed and the predicate term is distributed.
   e. Both the subject term and the predicate term are undistributed.

   ANS: E PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

6. Which of the following categorical propositions is in standard form?
   a. Some nerve cells are not susceptible of being regenerated.
   b. Not all incumbents are candidates who will be reelected.
   c. No recessions are times of economic expansion.
   d. Some allergic reactions last several hours.
   e. All surfers are opposed to coastal pollution.

   ANS: C PTS: 2

7. The categorical proposition "Some clinical trials are not pointless experiments" is an:
   a. **I**-type.
   b. **U**-type.
   c. **E**-type.
   d. **O**-type.
   e. **A**-type.

   ANS: D PTS: 2

8. Given the categorical proposition "No soccer balls are tetrahedrons." If the quality but not the quantity is changed, the resulting proposition is:
   a. All soccer balls are not tetrahedrons.
   b. All soccer balls are tetrahedrons.
   c. Some soccer balls are tetrahedrons.
   d. Some soccer balls are not tetrahedrons.
   e. All tetrahedrons are soccer balls.

   ANS: B PTS: 2

9. Given the categorical proposition "Some inventions are not success stories." If the quantity but not the quality is changed, the resulting proposition is:
   a. No inventions are success stories.
   b. Some inventions are success stories.
   c. Some inventions are not success stories.
   d. Some success stories are not inventions.
   e. All inventions are success stories.

   ANS: A PTS: 2

10. Given the categorical proposition "All elections are turning points." If both the quality and the quantity are changed, the resulting proposition is:
    a. All elections are not turning points.
    b. Some turning points are not elections.
    c. No elections are turning points.
    d. Some elections are turning points.
    e. Some elections are not turning points.

    ANS: E PTS: 2

    INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and an operation/relation to be performed on that statement. You must identify the new statement and the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

11. Some A are not non-B. (T) Subcontrary

a. All A are non-B. (Und.)
b. No A are non-B. (Und.)
c. Some A are non-B. (Und.)
d. Some A are B. (F)
e. Some A are non-B. (F)

ANS: C PTS: 2

12. Some A are not B. (F) Contraposition
a. Some B are not non-A. (F)
b. Some non-B are not non-A. (F)
c. Some A are B. (T)
d. Some non-B are not non-A. (Und.)
e. Some B are not A. (Und.)

ANS: B PTS: 2

13. Some non-A are B. (T) Contradictory
a. No non-A are B. (F)
b. Some non-A are not B. (F)
c. Some A are not B. (Und.)
d. No non-B are A. (F)
e. All non-A are B. (F)

ANS: A PTS: 2

14. Some A are B. (T) Obversion
a. Some B are A. (T)
b. Some non-B are non-A. (T)
c. Some non-A are not non-B. (T)
d. Some A are not non-B. (T)
e. Some non-A are not B. (Und.)

ANS: D PTS: 2

15. All A are non-B. (F) Conversion
a. All non-B are A. (F)
b. No A are non-B. (Und.)
c. Some A are not non-B. (T)
d. All B are non-A. (Und.)
e. All non-B are A. (Und.)

ANS: E PTS: 2

16. All non-A are B. (T) Subalternation
a. Some A are not B. (F)
b. Some A are non-B. (T)
c. Some non-A are B. (T)
d. No non-A are B. (F)
e. Some A are B. (T)

ANS: C PTS: 2

17. No A are non-B. (F) Contrary
a. All A are non-B. (Und.)
b. All A are non-B. (T)

c. Some A are non-B. (T)
d. No non-B are A. (T)
e. No non-B are A. (F)

ANS: A PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and a new statement. You must determine how the new statement is related to the given statement and determine the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

18. Some A are not B. (T) No A are B.
a. Subcontrary. (Und.)
b. Subalternation. (Und.)
c. Contraposition. (T)
d. Obversion. (T)
e. Contradictory. (F)

ANS: B PTS: 2

19. Some A are not non-B. (F) All A are non-B.
a. Contrary. (T)
b. Subalternation. (F)
c. Obversion. (F)
d. Contradictory. (T)
e. Subalternation. (Und.)

ANS: D PTS: 2

20. Some non-A are B. (F) Some non-B are A.
a. Contraposition. (Und.)
b. Obversion. (F)
c. Conversion. (T)
d. Contraposition. (F)
e. Conversion. (F)

ANS: A PTS: 2

21. All non-A are B. (F) No non-A are non-B.
a. Contrary. (Und.)
b. Contradictory. (T)
c. Obversion. (F)
d. Contraposition. (F)
e. Contrary. (T)

ANS: C PTS: 2

22. Some A are non-B. (F) Some A are not non-B.
a. Contrary. (Und.)
b. Subalternation. (F)
c. Contradictory. (T)
d. Contraposition. (F)
e. Subcontrary. (T)

ANS: E PTS: 2

23. All non-A are B. (T) No non-A are B.
    a. Contraposition. (T)
    b. Obversion. (T)
    c. Contraposition. (Und.)
    d. Contrary. (F)
    e. Contrary. (Und.)

    ANS: D PTS: 2

24. No A are non-B. (T) No non-B are A.
    a. Contraposition. (Und.)
    b. Conversion. (Und.)
    c. Conversion. (T)
    d. Conversion. (F)
    e. Obversion. (T)

    ANS: C PTS: 2

    INSTRUCTIONS: Select the answer that best characterizes each argument. Adopt the Aristotelian standpoint.

25. All trolls are ugly creatures. Therefore, no trolls are beautiful creatures.
    a. Invalid; illicit obversion.
    b. Invalid; illicit contrary.
    c. Invalid; existential fallacy.
    d. Invalid; illicit contraposition.
    e. Valid; no fallacy.

    ANS: E PTS: 2

26. Some restaurants are not high tech operations. Therefore, no restaurants are high tech operations.
    a. Invalid; illicit conversion.
    b. Invalid; illicit subalternation.
    c. Valid; existential fallacy.
    d. Valid; no fallacy.
    e. Invalid; illicit contrary.

    ANS: B PTS: 2

27. No tooth fairies are philanthropists. Therefore, it is false that all tooth fairies are philanthropists.
    a. Invalid; existential fallacy.
    b. Invalid; illicit contrary.
    c. Valid; no fallacy.
    d. Invalid; illicit contraposition.
    e. Invalid; illicit subalternation.

    ANS: A PTS: 2

28. It is false that some square triangles are cubes. Therefore, no square triangles are cubes.
    a. Invalid; illicit subalternation.
    b. Invalid; existential fallacy.
    c. Invalid; illicit contradiction.
    d. Valid; no fallacy.
    e. Invalid; illicit conversion.

    ANS: D PTS: 2

29. It is false that no jurists are distinguished scholars. Therefore, all jurists are distinguished scholars.
    a. Invalid; illicit subcontrary.
    b. Invalid; existential fallacy.
    c. Invalid; illicit contrary.
    d. Valid; no fallacy.
    e. Valid; illicit subalternation.

    ANS: C PTS: 2

30. Some guilty defendants are not believable witnesses. Therefore, some unbelievable witnesses are not innocent defendants.
    a. Invalid; existential fallacy.
    b. Valid; no fallacy.
    c. Invalid; illicit contraposition.
    d. Invalid; illicit contrary.
    e. Invalid; illicit subcontrary.

    ANS: B PTS: 2

31. Some websites are not celebrations of vanity. Therefore, some websites are celebrations of vanity.
    a. Invalid; illicit subalternation.
    b. Valid; unnamed fallacy.
    c. Valid; no fallacy.
    d. Invalid; illicit contraposition.
    e. Invalid; illicit subcontrary.

    ANS: E PTS: 2

32. No finished projects are uncompleted works. Therefore, no completed works are unfinished projects.
    a. Valid; no fallacy.
    b. Invalid; illicit contraposition.
    c. Invalid; illicit contrary.
    d. Invalid; illicit conversion.
    e. Invalid; illicit obversion.

    ANS: B PTS: 2

33. It is false that some funerals are gleeful occasions. Therefore, some funerals are not gleeful occasions.
    a. Invalid; existential fallacy.
    b. Invalid; illicit subcontrary.
    c. Invalid; illicit subalternation.
    d. Invalid; illicit conversion.
    e. Valid; no fallacy.

    ANS: E PTS: 2

34. Some flying horses are not zebras. Therefore, some zebras are not flying horses.
    a. Invalid; illicit conversion.
    b. Invalid; existential fallacy.
    c. Invalid; illicit subcontrary.
    d. Invalid; illicit contraposition.
    e. Valid; no fallacy.

    ANS: A PTS: 2

35. Some toys are not safe playthings. Therefore, some toys are unsafe playthings.
    a. Invalid; existential fallacy.
    b. Invalid; illicit contraposition.
    c. Invalid; illicit subalternation.
    d. Valid; no fallacy.
    e. Invalid; illicit subcontrary.

    ANS: D PTS: 2

36. It is false that no landlords are entrepreneurs who evict tenants. Therefore, all landlords are entrepreneurs who evict tenants.
    a. Invalid; illicit contrary.
    b. Valid; no fallacy.
    c. Invalid; existential fallacy.
    d. Invalid; illicit conversion.
    e. Invalid; illicit subcontrary.

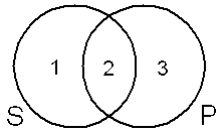
    ANS: A PTS: 2

37. It is false that some leprechauns are not cobblers. Therefore, it is false that no leprechauns are cobblers.
    a. Valid; existential fallacy.
    b. Invalid; illicit contrary.
    c. Valid; no fallacy.
    d. Invalid; illicit subalternation.
    e. Invalid; existential fallacy.

    ANS: E PTS: 2

    INSTRUCTIONS: Fill in the Venn diagram for each statement.

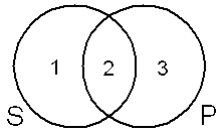
38. No S are P. (Boolean standpoint)



    After filling in the diagram,
    a. Area 1 is shaded, and there is a circled X in Area 2.
    b. Area 2 is shaded, and there is a circled X in Area 1.
    c. Area 2 is shaded, and there are no other marks.
    d. There is an X in Area 2.
    e. Area 3 is shaded, and there is a circled X in Area 2.

    ANS: C PTS: 2

39. Some S are not P. (Aristotelian standpoint)

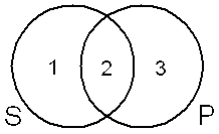


    After filling in the diagram,

a. There is an X in Area 3.
b. There is an X in Area 1.
c. Area 1 is shaded.
d. There is an X in Area 2.
e. Area 2 is shaded, and there is a circled X in Area 1.

ANS: B PTS: 2

40. All S are P. (Aristotelian standpoint)



After filling in the diagram,
a. There is an X in Area 1.
b. Area 2 is shaded.
c. Area 1 is shaded, and there is a circled X in Area 2.
d. Area 3 is shaded.
e. Area 1 is shaded, and there are no other marks.

ANS: C PTS: 2

INSTRUCTIONS: Select the best translation for each categorical proposition.

41. The only dogs in my home are poodles.
a. Some poodles are not dogs in my home.
b. All poodles are dogs in my home.
c. All dogs in my home are things identical to poodles.
d. All dogs in my home are poodles.
e. All poodles are the only dogs in my home.

ANS: D PTS: 2

42. There is a bird in the tree.
a. Some birds are animals in the tree.
b. All birds are animals in the tree.
c. Some birds are animals in the tree and some birds are not animals in the tree.
d. All animals in the tree are birds.
e. All things identical to a tree are places there is a bird.

ANS: A PTS: 2

43. All except the skaters won a medal.
a. All skaters are not people who won a medal.
b. No skaters are people who won a metal and all non-skaters are people who won a medal.
c. Some skaters are not people who won a medal.
d. All people who did not win a medal are skaters.
e. No skaters are people who won a medal.

ANS: B PTS: 2

44. Elms are not evergreens.
a. Some evergreens are not elms.

b. No things identical to elms are things identical to evergreens.
c. No non-evergreens are elms.
d. All elms are not evergreens.
e. No elms are evergreens.

ANS: E PTS: 2

45. If a deer has no horns, then it isn't a buck.
a. All bucks are deer with horns.
b. No deer that are not bucks are deer with horns.
c. All deer with horns are bucks.
d. All deer without horns are not bucks.
e. If a deer is a buck, then it has horns.

ANS: A PTS: 2

46. None but scoundrels are villains.
a. No scoundrels are villains, and all non-scoundrels are villains.
b. All scoundrels are villains.
c. All villains are scoundrels.
d. No scoundrels are villains.
e. All non-villains are non-scoundrels.

ANS: C PTS: 2

47. Not all attorneys are successful.
a. Some successful people are not attorneys.
b. Some attorneys are successful people and some attorneys are not successful people.
c. Some attorneys are not successful.
d. Some attorneys are not successful people.
e. All attorneys are not successful people.

ANS: D PTS: 2

48. Party animals occupy the next apartment.
a. Some people who occupy the next apartment are not party animals.
b. Some party animals are people who occupy the next apartment and some party animals are not people who occupy the next apartment.
c. Some party animals occupy the next apartment.
d. All party animals are people who occupy the next apartment.
e. Some party animals are people who occupy the next apartment.

ANS: E PTS: 2

49. She paints what she likes.
a. Some things she paints are things she likes to paint.
b. All things she likes to paint are things she paints.
c. Some things are things she likes to paint, and some things are not things she likes to paint.
d. All things she paints are things she likes to paint.
All people identical to her paint what they like.

ANS: B PTS: 2

50. Anderson was elected.
a. No people who were not elected are people not identical to Anderson.
b. All people identical to Anderson were elected persons.

c. All people identical to Anderson are people who were elected.
d. Some people identical to Anderson are people who were elected.
e. All people like Anderson are people who were elected.

ANS: C PTS: 2

Chapter 4 Test C

MULTIPLE CHOICE

Categorical Proposition 1C
Given the categorical proposition:
"Some corporations that are operating in the United States are not enterprises that are earning a profit."

1. In Categorical Proposition 1C, the subject term is:
   a. Some.
   b. Corporations that are operating in the United States.
   c. Enterprises.
   d. Enterprises that are earning a profit.
   e. Corporations.

   ANS: B PTS: 2

2. In Categorical Proposition 1C, the predicate term is:
   a. Are not.
   b. Earning a profit.
   c. Corporations that are operating in the United States.
   d. Enterprises.
   e. Enterprises that are earning a profit.

   ANS: E PTS: 2

3. In Categorical Proposition 1C, the copula is:
   a. Are not.
   b. Are earning.
   c. Are operating.
   d. Are.
   e. Not.

   ANS: A PTS: 2

4. In Categorical Proposition 1C, the quantity is:
   a. Affirmative.
   b. Universal.
   c. Particular.
   d. Negative.
   e. Some.

   ANS: C PTS: 2

5. In Categorical Proposition 1C:
   a. Both the subject term and the predicate term are distributed.
   b. The subject term is distributed and the predicate term is undistributed.
   c. The subject term is universal and the predicate term is particular.
   d. The subject term is undistributed and the predicate term is distributed.
   e. Both the subject term and the predicate term are undistributed.

   ANS: D PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

6. Which of the following categorical propositions is in standard form?
   a. Not all peace treaties are viable arrangements.
   b. Some Persian cats are pure white.
   c. No action movies are occasions for relaxation.
   d. Few novels are books worth reading.
   e. All incompetent administrators will be fired.

   ANS: C PTS: 2

7. The categorical proposition "Some debts are causes of insomnia" is an:
   a. **U**-type.
   b. **I**-type.
   c. **A**-type.
   d. **O**-type.
   e. **E**-type.

   ANS: B PTS: 2

8. Given the categorical proposition "Some drugs are not effective medicines." If the quality but not the quantity is changed, the resulting proposition is:
   a. All drugs are not effective medicines.
   b. No drugs are not effective medicines.
   c. All drugs are effective medicines.
   d. No drugs are effective medicines.
   e. Some drugs are effective medicines.

   ANS: E PTS: 2

9. Given the categorical proposition "All banks are lending institutions." If the quantity but not the quality is changed, the resulting proposition is:
   a. Some banks are lending institutions.
   b. Some banks are not lending institutions.
   c. All banks are not lending institutions.
   d. No banks are lending institutions.
   e. No banks are not lending institutions.

   ANS: A PTS: 2

10. Given the categorical proposition "Some franchises are moneymakers." If both the quality and the quantity are changed, the resulting proposition is:
    a. All franchises are not moneymakers.
    b. Some franchises are moneymakers.
    c. All franchises are moneymakers.
    d. No Franchises are moneymakers.
    e. Some franchises are not moneymakers.

    ANS: D PTS: 2

    INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and an operation/relation to be performed on that statement. You must identify the new statement and the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

11. All A are non-B. (F) Contrary

a. Some A are not B. (T)
b. No A are non-B. (Und.)
c. No A are non-B. (T)
d. No non-B are A. (F)
e. No A are B. (Und.)

ANS: B PTS: 2

12. All A are non-B. (F) Conversion
a. All B are non-A. (Und.)
b. All non-A are B. (F)
c. All non-B are A. (Und.)
d. No A are B. (F)
e. No A are non-B. (Und.)

ANS: C PTS: 2

13. No A are non-B. (T) Obversion
a. All A are B. (T)
b. No A are B. (F)
c. All non-A are B. (T)
d. No non-B are A. (T)
e. All non-A are non-B. (F)

ANS: A PTS: 2

14. No A are non-B. (T) Subalternation
a. No non-B are A. (T)
b. Some A are non-B. (Und.)
c. Some A are not B. (T)
d. Some A are not non-B. (T)
e. Some A are not non-B. (F)

ANS: D PTS: 2

15. Some non-A are B. (F) Contradiction
a. No A are non-B. (F)
b. All non-A are not B. (F)
c. Some non-B are A. (Und.)
d. Some non-A are not B. (F)
e. No non-A are B. (T)

ANS: E PTS: 2

16. Some non-A are not B. (F) Contraposition
a. Some B are not A. (F)
b. Some B are not non-A. (T)
c. Some non-B are not A. (F)
d. Some A are not non-B. (T)
e. Some non-B are non-A. (F)

ANS: C PTS: 2

17. Some non-A are not B. (F) Subcontrary
a. No non-A are B. (F)
b. Some non-A are B. (T)

c. Some A are B. (T)
d. Some A are B. (Und.)
e. Some non-A are B. (Und.)

ANS: B PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and a new statement. You must determine how the new statement is related to the given statement and determine the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

18. No non-A are non-B. (F) No B are A.
a. Contraposition. (F)
b. Conversion. (Und.)
c. Conversion. (F)
d. Contrary. (Und.)
e. Contraposition. (Und.)

ANS: E PTS: 2

19. Some non-A are not B. (T) Some non-A are B.
a. Subcontrary. (Und.)
b. Conversion. (Und.)
c. Contradiction. (F)
d. Contraposition. (T)
e. Obversion. (T)

ANS: A PTS: 2

20. All A are non-B. (F) No A are B.
a. Subalternation. (T)
b. Contrary. (Und.)
c. Conversion. (Und.)
d. Obversion. (F)
e. Contradictory. (T)

ANS: D PTS: 2

21. No A are B. (T) Some A are B.
a. Subalternation. (T)
b. Contradiction. (F)
c. Conversion. (T)
d. Contrary. (F)
e. Contraposition. (Und.)

ANS: B PTS: 2

22. No A are B. (T) All A are B.
a. Obversion. (T)
b. Contradictory. (F)
c. Contrary. (F)
d. Conversion. (T)
e. Subcontrary. (Und.)

ANS: C PTS: 2

23. Some A are non-B. (T) Some non-B are A.
    a. Conversion. (T)
    b. Subcontrary. (Und.)
    c. Contraposition. (Und.)
    d. Obversion. (T)
    e. Contraposition. (T)

    ANS: A PTS: 2

24. Some A are non-B. (T) All A are non-B.
    a. Subalternation. (T)
    b. Subcontrary. (Und.)
    c. Contraposition. (Und.)
    d. Subalternation. (Und.)
    e. Contradictory. (F)

    ANS: D PTS: 2

    INSTRUCTIONS: Select the answer that best characterizes each immediate inference. Adopt the Aristotelian standpoint for these problems.

25. No wind farms are pollution generators. Therefore, it is false that all wind farms are pollution generators.
    a. Invalid, existential fallacy.
    b. Invalid, illicit contrary.
    c. Invalid, illicit subalternation.
    d. Invalid, illicit conversion.
    e. Valid, no fallacy.

    ANS: E PTS: 2

26. It is false that some veterinarians are not animal lovers. Therefore, some veterinarians are animal lovers.
    a. Invalid, illicit conversion.
    b. Invalid, illicit subcontrary.
    c. Valid, no fallacy.
    d. Invalid, illicit subalternation.
    e. Invalid, existential fallacy.

    ANS: C PTS: 2

27. Some dark haired pixies are elves that play tricks. Therefore, some elves that do not play tricks are light haired pixies.
    a. Invalid, illicit conversion.
    b. Invalid, illicit contraposition.
    c. Invalid, existential fallacy.
    d. Invalid, illicit subcontrary.
    e. Valid, no fallacy.

    ANS: B PTS: 2

28. Some compact cars are hybrids. Therefore, it is false that no compact cars are hybrids.
    a. Invalid, illicit conversion.
    b. Invalid, illicit contrary.
    c. Invalid, illicit subcontrary.

d. Invalid, Illicit subalternation.
e. Valid, no fallacy.

ANS: E PTS: 2

29. It is false that all modern sculptures are attention grabbers. Therefore, no modern sculptures are attention grabbers.
a. Invalid, illicit conversion.
b. Invalid, illicit subalternation.
c. Valid, no fallacy.
d. Invalid, illicit contrary.
e. Invalid, existential fallacy.

ANS: D PTS: 2

30. Some lamps containing genies are occasions for surprise. Therefore, some occasions for surprise are lamps containing genies.
a. Valid, no fallacy.
b. Invalid, illicit conversion.
c. Invalid, illicit contrary.
d. Invalid, existential fallacy.
e. Invalid, illicit obversion.

ANS: A PTS: 2

31. It is false that no underdogs are winners. Therefore, it is false that some underdogs are not winners.
a. Valid, no fallacy.
b. Invalid, illicit contraposition.
c. Invalid, illicit subalternation.
d. Invalid, illicit subcontrary.
e. Invalid, illicit conversion.

ANS: C PTS: 2

32. It is false that some vampires are sun worshippers. Therefore, it is false that all vampires are sun worshippers.
a. Valid, no fallacy.
b. Invalid, illicit subalternation.
c. Invalid, illicit subcontrary.
d. Invalid, existential fallacy.
e. Invalid, illicit conversion.

ANS: D PTS: 2

33. Some fantasy films are enjoyable pastimes. Therefore, some fantasy films are not unenjoyable pastimes.
a. Invalid, illicit subcontrary.
b. Valid, no fallacy.
c. Invalid, illicit subalternation.
d. Invalid, illicit contraposition.
e. Invalid, illicit conversion.

ANS: B PTS: 2

34. All holiday parades are colorful events. Therefore, some holiday parades are colorful events.
a. Invalid, illicit subcontrary.

b. Invalid, existential fallacy.
c. Invalid, illicit contrary.
d. Invalid, illicit subalternation.
e. Valid, no fallacy.

ANS: E PTS: 2

35. All treasury notes are secure investments. Therefore, all secure investments are treasury notes.
a. Invalid, illicit obversion.
b. Valid, no fallacy.
c. Invalid, illicit contrary.
d. Invalid, illicit conversion.
e. Invalid, existential fallacy.

ANS: D PTS: 2

36. Some guitars are electronic devices. Therefore, some guitars are not electronic devices.
a. Invalid, illicit subcontrary.
b. Invalid, illicit subalternation.
c. Valid, no fallacy.
d. Invalid, illicit contraposition.
e. Invalid, illicit contrary.

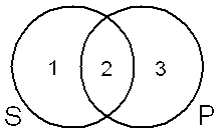
ANS: A PTS: 2

37. No flying carpets are dependable vehicles. Therefore, all flying carpets are undependable vehicles.
a. Invalid, illicit subalternation.
b. Invalid, illicit contrary.
c. Valid, no fallacy.
d. Invalid, illicit contraposition.
e. Invalid, existential fallacy.

ANS: C PTS: 2

INSTRUCTIONS: Fill in the Venn diagram for each statement.

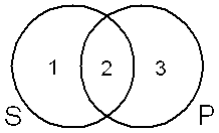
38. Some S are P. (Aristotelian standpoint)



After filling in the Venn diagram,
a. Area 1 is shaded, and there is a circled X in Area 2.
b. There is an X in Area 2, and there are no other marks.
c. There is a circled X in Area 2 and there are no other marks.
d. Area 2 is shaded, and there is a circled X in Area 1
e. There is an X in Area 1, and there are no other marks.

ANS: B PTS: 2

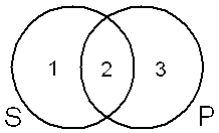
39. All S are P. (Aristotelian standpoint)



After filling in the Venn diagram,
a. Area 2 is shaded, and there are no other marks.
b. Area 1 is shaded, and there are no other marks.
c. Area 2 is shaded, and there is a circled X in Area 1.
d. There is an X in Area 2, and there are no other marks.
e. Area 1 is shaded, and there is a circled X in Area 2.

ANS: E PTS: 2

40. No S are P. (Boolean standpoint.)



After filling in the Venn diagram,
a. Area 1 is shaded, and there are no other marks.
b. Area 2 is shaded, and there is an X in Area 1.
c. Area 2 is shaded, and there is a circled X in Area 1.
d. Area 2 is shaded, and there are no other marks.
e. Area 2 is shaded, and there is an X in Area 3.

ANS: D PTS: 2

INSTRUCTIONS: Select the best translation for each categorical proposition.

41. All the desserts except the creampuffs are available.
a. Some creampuffs are available and some creampuffs are not available.
b. No creampuffs are desserts that are available and all desserts that are not creampuffs are desserts that are available.
c. No creampuffs are desserts that are available.
d. All creampuffs are desserts that are available and no desserts that are not creampuffs are desserts that are available.
e. All desserts that are not creampuffs are desserts that are available.

ANS: B PTS: 2

42. There is a tavern in the town.
a. Some taverns are not things in the town.
b. Some taverns are things in the town, and some taverns are not things in the town.
c. Some taverns are things in the town.
d. All taverns are things in the town.
e. No taverns are not things in the town.

ANS: C PTS: 2

43. Gnomes are not humans.
a. No gnomes are humans.
b. All gnomes are not humans.

c. No things identical to a gnome are things identical to a human.
d. All humans are not gnomes.
e. No gnomes are things that are not humans.

ANS: A PTS: 2

44. He shoots anything that moves.
a. Some things he shoots are things that move.
b. All things that move are things he shoots.
c. All things he shoots are things that move.
d. No things that do not move are things he shoots.
e. All things that do not move are things he shoots.

ANS: B PTS: 2

45. A few paintings are not for sale.
a. Some paintings are not for sale.
b. Some paintings are items for sale, and some paintings are not items for sale.
c. Some paintings are items for sale.
d. Some items for sale are not paintings.
e. Some paintings are not items for sale.

ANS: E PTS: 2

46. None but kind people are well intentioned.
a. No kind people are people who are not well intentioned.
b. Some well intentioned people are kind people.
c. All kind people are well intentioned people.
d. All well intentioned people are kind people.
e. Some kind people are not well intentioned people.

ANS: D PTS: 2

47. Not every concert pianist is famous.
a. Some concert pianists are famous people.
b. All concert pianists are not famous people.
c. Some concert pianists are not famous people.
d. Some concert pianists are not famous.
e. Some famous people are not concert pianists.

ANS: C PTS: 2

48. Pamela is not in the room.
a. Some people identical to Pamela are not people in the room.
b. All people identical to Pamela are not people in the room.
c. Some people in the room are not people identical to Pamela.
d. All people in the room are not people identical to Pamela.
e. No people identical to Pamela are people in the room.

ANS: E PTS: 2

49. The only articles on the shelf are vases.
a. All articles on the shelf are vases.
b. All things identical to vases are articles on the shelf.
c. All vases are articles on the shelf.
d. Some articles on the shelf are vases.

e. No articles not on the shelf are vases.

ANS: A PTS: 2

50. A child peered through the window.
    a. Some children peered through the window, and some children did not peer through the window.
    b. Some children are people who peered through the window.
    c. All children are people who peered through the window.
    d. Some children are not people who peered through the window.
    e. Some people identical to a child are people who peered through the window.

ANS: B PTS: 2

Chapter 4 Test D

MULTIPLE CHOICE

Categorical Proposition 1D
Given the categorical proposition:
"All email messages that are solicitations for private information are communications that are not entitled to responses."

1. In Categorical Proposition 1D, the subject term is:
   a. Email messages.
   b. Communications.
   c. Communications that are not entitled to responses.
   d. Email messages that are solicitations for private information.
   e. Solicitations for private information.

   ANS: D PTS: 2

2. In Categorical Proposition 1D, the quantifier is:
   a. All.
   b. Negative.
   c. Universal.
   d. Are.
   e. Affirmative.

   ANS: A PTS: 2

3. In Categorical Proposition 1D, the quality is:
   a. Are.
   b. Particular.
   c. Affirmative.
   d. Negative.
   e. Are not.

   ANS: C PTS: 2

4. In Categorical Proposition 1D, the quantity is:
   a. Particular.
   b. Universal.
   c. All.
   d. Affirmative.
   e. Singular.

   ANS: B PTS: 2

5. In Categorical Proposition 1D, which terms are distributed?
   a. The predicate but not the subject.
   b. Both the subject and the predicate.
   c. Neither the subject not the predicate.
   d. The quantifier but not the copula.
   e. The subject but not the predicate.

   ANS: E PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

6. Which of the following categorical propositions is in standard form?
   a. No same-sex marriages are supported by evangelical Christians.
   b. All political donors expect hefty paybacks from politicians.
   c. Some face lifts are less than successful procedures.
   d. High speed chases are accidents waiting to happen.
   e. Some corporate shake-ups have reverberations affecting all employees.

   ANS: C PTS: 2

7. The statement "No government bonds are securities that pay high interest" is a(n):
   a. **E**-proposition.
   b. **O**-proposition.
   c. **S**-proposition.
   d. **A**-proposition.
   e. **I**-proposition.

   ANS: A PTS: 2

8. Given the categorical proposition "All mail order brides are women who face risky futures." If the quality but not the quantity is changed, the resulting proposition is:
   a. All mail order brides are not women who face risky futures.
   b. Some mail order brides are not women who face risky futures.
   c. Some mail order brides are women who face risky futures.
   d. No mail order brides are women who face risky futures.
   e. Some mail order brides are women who do not face risky futures.

   ANS: D PTS: 2

9. Given the categorical proposition "Some genetic mutations are occurrences that lead to disease." If the quantity but not the quality is changed, the resulting proposition is:
   a. Some genetic mutations are not occurrences that lead to disease.
   b. All genetic mutations are occurrences that lead to disease.
   c. No genetic mutations are occurrences that lead to disease.
   d. All genetic mutations are occurrences that do not lead to disease.
   e. Some occurrences that lead to disease are genetic mutations.

   ANS: B PTS: 2

10. Given the categorical proposition "Some asset protection trusts are not arrangements for cheating creditors." If both the quality and the quantity are changed, the resulting proposition is:
    a. All asset protection trusts are arrangements for cheating creditors.
    b. Some asset protection trusts are arrangements for cheating creditors.
    c. No asset protection trusts are not arrangements for cheating creditors.
    d. No asset protection trusts are arrangements for cheating creditors.
    e. All asset protection trusts are not arrangements for cheating creditors.

    ANS: A PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and an operation/relation to be performed on that statement. You must identify the new statement and the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

11. All non-A are non-B. (F) Conversion
    a. No non-A are non-B. (Und)
    b. All non-B are non-A. (F)
    c. All B are A. (F)
    d. No Non-A are non-B. (T)
    e. All non-B are non-A. (Und.)

    ANS: E PTS: 2

12. No non-A are B. (T) Obversion.
    a. No B are non-A. (T)
    b. Some non-A are not B. (T)
    c. All non-A are non-B. (T)
    d. All A are non-B. (Und.)
    e. Some non-A are B. (F)

    ANS: C PTS: 2

13. No non-A are B. (T) Contrary
    a. All non-A are not B. (F)
    b. No B are non-A. (T)
    c. Some non-A are B. (F)
    d. All non-A are B. (F)
    e. No non-B are A. (Und.)

    ANS: D PTS: 2

14. Some non-A are B. (F) Contradictory
    a. All non-A are not B. (T)
    b. Some non-A are not B. (T)
    c. No non-A are B. (T)
    d. Some non-A are non-B. (T)
    e. No non-A are non-B. (F)

    ANS: C PTS: 2

15. Some A are not non-B. (T) Subcontrary
    a. No A are non-B. (Und.)
    b. Some A are non-B. (Und.)
    c. Some B are not non-A. (T)
    d. Some A are non-B. (F)
    e. No A are non-B. (T)

    ANS: B PTS: 2

16. All non-A are B. (F) Contraposition
    a. Some non-A are not B. (T)
    b. All B are non-A. (Und.)
    c. No non-A are B. (Und.)
    d. All non-B are A. (F)
    e. All A are non-B. (F)

    ANS: D PTS: 2

17. No A are B. (F) Subalternation.
    a. Some A are not B. (Und.)

b. All A are B. (T)
c. Some A are not B. (F)
d. No non-B are non-A. (Und.)
e. All A are B. (Und.)

ANS: A PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and a new statement. You must determine how the new statement is related to the given statement and determine the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

18. No A are non-B. (T) No B are non-A.
a. Contraposition. (T)
b. Obversion. (T)
c. Contraposition. (Und.)
d. Conversion. (T)
e. Conversion. (Und.)

ANS: C PTS: 2

19. Some non-A are non-B. (F) Some non-A are not non-B.
a. Contraposition. (F)
b. Subalternation. (Und.)
c. Contradictory. (T)
d. Subalternation. (F)
e. Subcontrary. (T)

ANS: E PTS: 2

20. Some A are not non-B. (T) Some A are B.
a. Subcontrary. (Und.)
b. Obversion. (T)
c. Conversion. (T)
d. Contrary. (F)
e. Contraposition. (T)

ANS: B PTS: 2

21. Some non-A are B. (F) Some B are non-A.
a. Subcontrary. (T)
b. Conversion. (Und.)
c. Contraposition. (Und.)
d. Conversion. (F)
e. Contraposition. (F)

ANS: D PTS: 2

22. All A are non-B. (T) Some A are not non-B.
a. Subalternation. (Und.)
b. Contrary. (F)
c. Contraposition. (T)
d. Subalternation. (T)
e. Contradictory. (F)

ANS: E PTS: 2

23. All A are non-B. (F) No A are non-B.
    a. Obversion. (F)
    b. Contradictory. (T)
    c. Contrary. (Und.)
    d. Subcontrary. (T)
    e. Subalternation. (Und.)

    ANS: C PTS: 2

24. Some B are non-A. (F) All B are non-A.
    a. Subalternation. (F)
    b. Contradictory. (T)
    c. Subcontrary. (Und.)
    d. Subalternation. (Und.)
    e. Subcontrary. (T)

    ANS: A PTS: 2

    INSTRUCTIONS: Select the answer that best characterizes each immediate inference. Adopt the Aristotelian standpoint for these problems.

25. Some judicial rulings are not displays of wisdom. Therefore, some judicial rulings are displays of wisdom.
    a. Invalid, illicit contrary.
    b. Invalid, illicit subcontrary.
    c. Valid.
    d. Invalid, existential fallacy.
    e. Invalid, illicit subalternation.

    ANS: B PTS: 2

26. No mad cows are healthy sources of food. Therefore, some mad cows are not healthy sources of food.
    a. Invalid, illicit contradictory.
    b. Invalid, illicit subalternation.
    c. Invalid, illicit subcontrary.
    d. Invalid, illicit contrary.
    e. Valid.

    ANS: E PTS: 2

27. Some unhappy unicorns are not appreciative creatures. Therefore, some unappreciative creatures are not happy unicorns.
    a. Invalid, illicit contraposition.
    b. Invalid, illicit conversion.
    c. Invalid, existential fallacy.
    d. Valid.
    e. Invalid, illicit subcontrary.

    ANS: D PTS: 2

28. Some ski areas are not settings for avalanches. Therefore, no ski areas are settings for avalanches.
    a. Valid.
    b. Invalid, illicit subcontrary.
    c. Invalid, existential fallacy.

d. Invalid, illicit contrary.
e. Invalid, illicit subalternation.

ANS: E PTS: 2

29. Some antidepressants are not safe medications for children. Therefore, some antidepressants are unsafe medications for children.
a. Invalid, illicit obversion.
b. Invalid, illicit conversion.
c. Valid.
d. Invalid, illicit subcontrary.
e. Invalid, illicit subalternation.

ANS: C PTS: 2

30. No popular casinos are establishments without bright lights. Therefore, no establishments with bright lights are unpopular casinos.
a. Valid.
b. Invalid, illicit contraposition.
c. Invalid, illicit obversion.
d. Invalid, existential fallacy.
e. Invalid, illicit conversion.

ANS: B PTS: 2

31. No tooth fairies are clumsy buffoons. Therefore, it is false that all tooth fairies are clumsy buffoons.
a. Invalid, existential fallacy.
b. Invalid, illicit contrary.
c. Invalid, illicit subalternation.
d. Valid.
e. Invalid, illicit subcontrary.

ANS: A PTS: 2

32. It is false that some entrance exams are not occasions for panic. Therefore, some entrance exams are occasions for panic.
a. Invalid, illicit subalternation.
b. Valid.
c. Invalid, illicit subcontrary.
d. Invalid, illicit contrary.
e. Invalid, illicit contraposition.

ANS: B PTS: 2

33. It is false that all diets are programs that retard aging. Therefore, no diets are programs that retard aging.
a. Invalid, illicit subalternation.
b. Invalid, illicit subcontrary.
c. Valid.
d. Invalid, existential fallacy.
e. Invalid, illicit contrary.

ANS: E PTS: 2

34. All fire-breathing dragons are warm blooded lizards. Therefore, all warm blooded lizards are fire-breathing dragons.

a. Invalid, illicit contrary.
b. Invalid, illicit contraposition.
c. Invalid, existential fallacy.
d. Invalid, illicit conversion.
e. Valid.

ANS: D PTS: 2

35. No painkillers are drugs entirely without side effects. Therefore, it is false that all painkillers are drugs entirely without side effects.
a. Valid.
b. Invalid, illicit contrary.
c. Invalid, illicit subcontrary.
d. Invalid, illicit subalternation.
e. Invalid, illicit conversion.

ANS: A PTS: 2

36. It is false that all ballet performances are thrilling exhibitions. Therefore, it is false that some ballet performances are thrilling exhibitions.
a. Invalid, illicit subcontrary.
b. Valid.
c. Invalid, illicit subalternation.
d. Invalid, illicit contrary.
e. Invalid, existential fallacy.

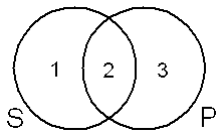
ANS: C PTS: 2

37. Some religious displays are violations of the First Amendment. Therefore, some violations of the First Amendment are religious displays.
a. Invalid, illicit contraposition.
b. Valid.
c. Invalid, illicit contrary.
d. Invalid, illicit subcontrary.
e. Invalid, illicit conversion.

ANS: B PTS: 2

INSTRUCTIONS: Fill in the Venn diagram for each statement.

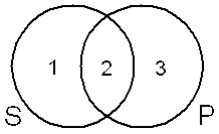
38. No S are P. (Aristotelian standpoint)



After filling in the diagram,
a. Area 2 is shaded, and there is a circled X in Area 1.
b. Areas 1 and 3 are shaded.
c. Area 1 is shaded, and there is a circled X in Area 2.
d. Area 2 is shaded, and there are no other marks.
e. There is an X in Area 2.

ANS: A PTS: 2

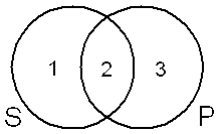
39. Some S are not P. (Aristotelian standpoint)



After filling in the diagram,
a. Area 1 is shaded.
b. Area 2 is shaded, and there is a circled X in Area 1.
c. There is an X in Area 1, and there are no other marks.
d. Area 1 is shaded, and there is a circled X in Area 2.
e. There is a circled X in Area 1, and there are no other marks.

ANS: C PTS: 2

40. All S are P. (Boolean standpoint)



After filling in the diagram,
a. Areas 1 and 3 are shaded.
b. Area 2 is shaded, and there are no other marks.
c. Area 1 is shaded, and there is a circled X in Area 2.
d. There is an X in Area 2.
e. Area 1 is shaded, and there are no other marks.

ANS: E PTS: 2

INSTRUCTIONS: Select the answer that best translates the statement into a standard form categorical proposition.

41. Not every house was damaged.
a. Some houses were not damaged.
b. Some houses are things that were damaged.
c. No houses were damaged.
d. Some houses are not things that were damaged.
e. All houses are not things that were damaged.

ANS: D PTS: 2

42. Women are dancing in the street.
a. All women are persons who are dancing in the street.
b. All streets are places some women are dancing.
c. Some women are persons who are dancing in the street.
d. Some women are not persons who are dancing in the street.
e. Some women are dancing in the street.

ANS: C PTS: 2

43. Sausages are not edible unless they are cooked.

a. All uncooked sausages are not edible sausages.
b. Some cooked sausages are edible sausages.
c. All cooked sausages are edible sausages.
d. All edible sausages are cooked sausages.
e. No inedible sausages are cooked sausages.

ANS: D PTS: 2

44. She sings when she's happy.
a. All times she's happy are times she sings.
b. Some times she sings are times she's happy.
c. All times she sings are times she's happy.
d. All persons who sing are persons who are happy.
e. All persons identical to her sing when they are happy.

ANS: A PTS: 2

45. A Chevrolet is not a Ford.
a. Some Chevrolets are not Fords.
b. All Chevrolets are things that are not identical to a Ford.
c. No things identical to a Chevrolet are things identical to a Ford.
d. All Chevrolets are not Fords.
e. No Chevrolets are Fords.

ANS: E PTS: 2

46. Only cats are felines.
a. Some non-cats are not felines.
b. All felines are cats.
c. All cats are felines.
d. Some cats are felines.
e. All things identical to a cat are things identical to a feline.

ANS: B PTS: 2

47. All except the welders got a raise.
a. No welders are persons who got a raise and all non-welders are persons who got a raise.
b. All non-welders got a raise and no welders got a raise.
c. All welders are not persons who got a raise.
d. No welders are persons who got a raise.
e. All persons who are not welders are persons who got a raise.

ANS: A PTS: 2

48. A child screamed.
a. All children are persons who screamed.
b. No persons who screamed are non-children.
c. Some children are persons who screamed.
d. Some children are persons who did not scream.
e. Some persons who screamed are not children.

ANS: C PTS: 2

49. Nairobi is in Kenya.
a. All places like Nairobi are places in Kenya.
b. All cities not identical to Nairobi are cities not in Kenya.

c. All Nairobis are in Kenya.
d. All cities identical to Nairobi are cities in Kenya.
e. Some cities identical to Nairobi are cities in Kenya.

ANS: D PTS: 2

50. There is a statue in the yard.
a. All statues are things in the yard.
b. No non-statues are things in the yard.
c. Some things in the yard are not statues.
d. Some statues are in the yard.
e. Some statues are things in the yard.

ANS: E PTS: 2

Chapter 4 Test E

MULTIPLE CHOICE

Categorical Proposition 1E
Given the categorical proposition:
"Some federal budgets that are bloated by war spending are not burdens that are fair to taxpayers."

1. In Categorical Proposition 1E, the predicate term is:
   a. Fair to taxpayers.
   b. Bloated by war spending.
   c. Burdens that are fair to taxpayers.
   d. Burdens.
   e. Federal budgets that are bloated by war spending.

   ANS: C PTS: 2

2. In Categorical Proposition 1E, the copula is:
   a. Affirmative.
   b. Some.
   c. Are.
   d. Negative.
   e. Are not.

   ANS: E PTS: 2

3. In Categorical Proposition 1E, which terms are distributed?
   a. The predicate but not the subject.
   b. Both the subject and the predicate.
   c. Neither the subject not the predicate.
   d. The term complement of the predicate.
   e. The subject but not the predicate.

   ANS: A PTS: 2

4. In Categorical Proposition 1E, the quality is:
   a. Subjective.
   b. Universal.
   c. Affirmative.
   d. Negative.
   e. Particular.

   ANS: D PTS: 2

5. In Categorical Proposition 1E, the quantity is:
   a. Some.
   b. Particular.
   c. Negative.
   d. Affirmative.
   e. Universal.

   ANS: B PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

6. Which of the following categorical propositions is in standard form?
   a. No romantic poets are supporters of conventional mores.
   b. Every increase in military spending causes concern in foreign capitals.
   c. Digital cameras are devices that contain microchips.
   d. All Epicureans have decadent sensate values.
   e. Some whole grain cereals are good for the heart.

   ANS: A PTS: 2

7. The statement "Some climatic changes are occurrences caused by interstellar dust" is a(n):
   a. **E**-proposition.
   b. **O**-proposition.
   c. **I**-proposition.
   d. **A**-proposition.
   e. **S**-proposition.

   ANS: C PTS: 2

8. Given the categorical proposition "All cases of asthma are maladies that affect breathing." If both the quality and the quantity are changed, the resulting proposition is:
   a. No cases of asthma are maladies that affect breathing.
   b. Some cases of asthma are not maladies that affect breathing.
   c. All cases of asthma are not maladies that affect breathing.
   d. Some cases of asthma are maladies that affect breathing.
   e. Some cases of asthma are maladies that do not affect breathing.

   ANS: B PTS: 2

9. Given the categorical proposition "Some tax loopholes are benefits that reward special interests." If the quality but not the quantity is changed, the resulting proposition is:
   a. No tax loopholes are benefits that reward special interests.
   b. All tax loopholes are benefits that reward special interests.
   c. Some tax loopholes are benefits that do not reward special interests.
   d. Some tax loopholes are not benefits that reward special interests.
   e. No tax loopholes are benefits that do not reward special interests.

   ANS: D PTS: 2

10. Given the categorical proposition "No employees of Wal-Mart are workers paid high wages." If the quantity but not the quality is changed, the resulting proposition is:
    a. No employees of Wal-Mart are workers who are not paid high wages.
    b. All employees of Wal-Mart are workers paid high wages.
    c. All employees of Wal-Mart are workers who are not paid high wages.
    d. Some employees of Wal-Mart are workers paid high wages.
    e. Some employees of Wal-Mart are not workers paid high wages.

    ANS: E PTS: 2

    INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and an operation/relation to be performed on that statement. You must identify the new statement and the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

11. Some A are non-B. (F) Subalternation

a. All A are non-B. (Und.)
b. Some A are not non-B. (T)
c. Some B are non-A. (Und.)
d. All A are non-B. (F)
e. Some A are not non-B. (Und.)

ANS: D PTS: 2

12. No non-A are non-B. (F) Obversion
a. All non-A are B. (F)
b. No non-B are non-A. (F)
c. No B are A. (Und.)
d. All non-A are non-B. (Und.)
e. Some non-A are non-B. (T)

ANS: A PTS: 2

13. Some A are not non-B. (T) Conversion
a. Some B are not non-A. (Und.)
b. Some non-B are not A. (T)
c. Some B are not non-A. (T)
d. All A are non-B. (F)
e. Some non-B are not A. (Und.)

ANS: E PTS: 2

14. All A are B. (F) Contrary
a. All B are A. (Und.)
b. No A are B. (Und.)
c. All non-B are non-A. (F)
d. No A are B. (T)
e. All B are A. (F)

ANS: B PTS: 2

15. Some A are not B. (T) Contraposition
a. Some non-A are not non-B. (T)
b. All A are B. (F)
c. Some non-B are not non-A. (T)
d. Some B are not A. (Und.)
e. No A are B. (Und.)

ANS: C PTS: 2

16. All A are non-B. (F) Contradictory.
a. Some A are B. (T)
b. All A are not non-B. (T)
c. No A are non-B. (Und.)
d. No A are non-B. (T)
e. Some A are not non-B. (T)

ANS: E PTS: 2

17. Some non-A are not B. (F) Subalternation
a. No non-A are B. (Und.)
b. Some non-A are B. (T)

c. Some non-B are not A. (F)
d. No non-A are B. (F)
e. Some non-A are B. (Und.)

ANS: D PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and a new statement. You must determine how the new statement is related to the given statement and determine the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

18. Some non-A are non-B. (F) Some B are A.
a. Conversion. (F)
b. Contraposition. (F)
c. Conversion. (Und.)
d. Subcontrary. (T)
e. Contraposition. (Und.)

ANS: E PTS: 2

19. No non-A are B. (F) No B are non-A.
a. Contraposition. (Und.)
b. Contrary. (Und.)
c. Conversion. (F)
d. Conversion. (Und.)
e. Contraposition. (F)

ANS: C PTS: 2

20. No non-A are B. (T) All non-A are B.
a. Contrary. (F)
b. Contradictory. (F)
c. Contrary. (Und.)
d. Contraposition. (T)
e. Contraposition. (Und.)

ANS: A PTS: 2

21. Some non-A are B. (T) No non-A are B.
a. Subcontrary. (Und.)
b. Contradictory. (F)
c. Contrary. (F)
d. Subalternation. (Und.)
e. Contrary. (Und.)

ANS: B PTS: 2

22. Some A are B. (T) Some A are not non-B.
a. Obversion. (T)
b. Contradictory. (F)
c. Contraposition. (Und.)
d. Contrary. (F)
e. Subcontrary. (Und.)

ANS: A PTS: 2

23. No A are non-B. (F) Some A are not non-B.
    a. Contradictory. (T)
    b. Subalternation. (F)
    c. Subcontrary. (T)
    d. Subalternation. (Und.)
    e. Subcontrary. (Und.)

    ANS: D PTS: 2

24. All non-A are B. (F) Some non-A are B.
    a. Contraposition. (F)
    b. Subalternation. (F)
    c. Contradictory. (T)
    d. Contraposition. (Und.)
    e. Subalternation. (Und.)

    ANS: E PTS: 2

    INSTRUCTIONS: Select the answer that best characterizes each immediate inference. Adopt the Aristotelian standpoint for these problems.

25. Some white supremacists are individuals involved in crime. Therefore, it is false that some white supremacists are not individuals involved in crime.
    a. Invalid, illicit subalternation.
    b. Invalid, illicit subcontrary.
    c. Valid.
    d. Invalid, illicit contrary.
    e. Invalid, illicit contraposition.

    ANS: B PTS: 2

26. It is false that some serial killers are not deranged psychopaths. Therefore, all serial killers are deranged psychopaths.
    a. Invalid, existential fallacy.
    b. Invalid, illicit contrary.
    c. Valid.
    d. Invalid, illicit contradictory.
    e. Invalid, illicit subalternation.

    ANS: C PTS: 2

27. All flying reindeer are happy creatures. Therefore, no flying reindeer are unhappy creatures.
    a. Invalid, illicit obversion.
    b. Invalid, existential fallacy.
    c. Invalid, illicit contraposition.
    d. Valid.
    e. Invalid, illicit contrary.

    ANS: D PTS: 2

28. It is false that no high schools are institutions plagued by drunkenness. Therefore, it is false that some high schools are not institutions plagued by drunkenness.
    a. Invalid, illicit subalternation.
    b. Invalid, illicit subcontrary.
    c. Invalid, illicit contrary.

d. Invalid, illicit conversion.
e. Valid.

ANS: A PTS: 2

29. No sugar plum fairies are threatening beasts. Therefore, some sugar plum fairies are not threatening beasts.
a. Valid.
b. Invalid, existential fallacy.
c. Invalid, illicit subalternation.
d. Invalid, illicit subcontrary.
e. Invalid, illicit contrary.

ANS: B PTS: 2

30. No arms manufacturers are contributors to world peace. Therefore, no contributors to world peace are arms manufacturers.
a. Invalid, illicit contrary.
b. Invalid, illicit conversion.
c. Invalid, illicit contraposition.
d. Invalid, illicit obversion.
e. Valid.

ANS: E PTS: 2

31. It is false that no student loans are heavy financial burdens. Therefore, all student loans are heavy financial burdens.
a. Valid.
b. Invalid, existential fallacy.
c. Invalid, illicit subcontrary.
d. Invalid, illicit contrary.
e. Invalid, illicit subalternation.

ANS: D PTS: 2

32. It is false that some flu shots are guarantees of immunity. Therefore, some flu shots are not guarantees of immunity.
a. Invalid, illicit contrary.
b. Invalid, illicit subalternation.
c. Valid.
d. Invalid, illicit subcontrary.
e. Invalid, illicit contraposition.

ANS: C PTS: 2

33. All fair elections are elections untainted with fraud. Therefore, all elections tainted with fraud are unfair elections.
a. Valid.
b. Invalid, illicit conversion.
c. Invalid, existential fallacy.
d. Invalid, illicit obversion.
e. Invalid, illicit contraposition.

ANS: A PTS: 2

34. Some leprechauns are not wealthy dwarfs. Therefore, some wealthy dwarfs are not leprechauns.

a. Invalid, illicit contraposition.
b. Invalid, illicit conversion.
c. Valid.
d. Invalid, illicit subcontrary.
e. Invalid, existential fallacy.

ANS: B PTS: 2

35. It is false that some rare coins are worthless collectibles. Therefore, it is false that all rare coins are worthless collectibles.
a. Invalid, illicit conversion.
b. Invalid, illicit subcontrary.
c. Invalid, illicit contrary.
d. Invalid, illicit subalternation.
e. Valid.

ANS: E PTS: 2

36. Some unsuccessful high schools are institutions threatened with closure. Therefore, some institutions not threatened with closure are successful high schools.
a. Invalid, illicit subcontrary.
b. Valid.
c. Invalid, illicit conversion.
d. Invalid, illicit contraposition.
e. Invalid, illicit subalternation.

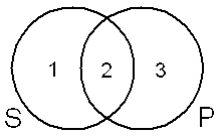
ANS: D PTS: 2

37. All computer games are opportunities for wasting time. Therefore, it is false that no computer games are opportunities for wasting time.
a. Valid.
b. Invalid, illicit subcontrary.
c. Invalid, illicit contrary
d. Invalid, existential fallacy.
e. Invalid, illicit subalternation.

ANS: A PTS: 2

INSTRUCTIONS: Fill in the Venn diagram for each statement.

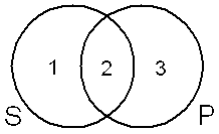
38. No S are P. (Aristotelian standpoint)



After filling in the diagram,
a. Area 2 is shaded, and there is a circled X in Area 3.
b. Area 1 is shaded, and there are no other marks.
c. Area 2 is shaded, and there are no other marks.
d. Area 1 is shaded, and there is a circled X in Area 2.
e. Area 2 is shaded, and there is a circled X in Area 1.

ANS: E PTS: 2

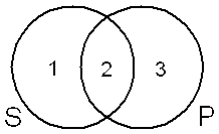
39. Some S are not P. (Boolean standpoint)



After filling in the diagram,
a. Areas 1 and 3 are shaded.
b. Area 2 is shaded, and there is an X in Area 1.
c. Area 1 is shaded, and there are no other marks.
d. There is an X in Area 1, and there are no other marks.
e. Area 3 is shaded, and there is an X in Area 1.

ANS: D PTS: 2

40. All S are P. (Boolean standpoint)



After filling in the diagram,
a. Area 1 is shaded, and there is a circled X in Area 2.
b. Area 2 is shaded, and there is a circled X in Area 1.
c. Area 1 is shaded, and there are no other marks.
d. Area 2 is shaded, and there are no other marks.
e. Areas 2 and 3 are shaded.

ANS: C PTS: 2

INSTRUCTIONS: Select the answer that best translates the statement into a standard form categorical proposition.

41. There are mountains on the horizon.
a. Some things on the horizon are not mountains.
b. Some mountains are things on the horizon.
c. Some mountains are not things on the horizon.
d. Some mountains are on the horizon.
e. All mountains are not things on the horizon.

ANS: B PTS: 2

42. She says what's on her mind.
a. Some things she says are things on her mind.
b. Some things that are on her mind are not things she says.
c. All things she says are things that are on her mind.
d. All persons identical to her say what is on their mind.
e. All things that are on her mind are things she says.

ANS: E PTS: 2

43. An agate is not precious.

a. Some agates are not precious stones.
b. All agates are not precious stones.
c. No things identical to an agate are stones that are precious.
d. No agates are precious stones.
e. All non-precious stones are stones that are not agates.

ANS: D PTS: 2

44. Tulips are blooming in the garden.
a. Some tulips are flowers blooming in the garden.
b. All flowers blooming in the garden are tulips.
c. Some tulips are not flowers blooming in the garden.
d. All tulips are flowers blooming in the garden.
e. Some tulips are blooming in the garden.

ANS: A PTS: 2

45. None but English Majors are eligible.
a. All English majors are persons who are eligible.
b. Some English majors are persons who are not eligible.
c. All persons who are eligible are English majors.
d. All persons who are not eligible are persons who are not English majors.
e. Some English majors are persons who are eligible.

ANS: C PTS: 2

46. If it's sweet, then she'll like it.
a. No things she likes are things that are not sweet.
b. All persons identical to her like sweet things.
c. All things she likes are sweet things.
d. Some sweet things are things she likes.
e. All sweet things are things she likes.

ANS: E PTS: 2

47. A locust is a grasshopper.
a. All things identical to a locust are things identical to a grasshopper.
b. All locusts are grasshoppers.
c. All grasshoppers are locusts.
d. Some locusts are grasshoppers.
e. No non-locusts are non-grasshoppers.

ANS: B PTS: 2

48. Shoes are not comfortable unless they fit well.
a. All comfortable shoes are shoes that fit well.
b. No uncomfortable shoes are shoes that fit well.
c. Some comfortable shoes are shoes that fit well.
d. All shoes that fit well are comfortable shoes.
e. All uncomfortable shoes are shoes that do not fit well.

ANS: A PTS: 2

49. Not every student will graduate.
a. Some students will not graduate.
b. All students are not persons who will graduate.

c. Some persons who will graduate are not students.
d. Some students are not persons who will graduate.
e. No persons who will graduate are non-students.

ANS: D PTS: 2

50. The Eiffel Tower is not in Berlin.
a. Some things in Berlin are not things identical to the Eiffel Tower.
b. All things like the Eiffel Tower are things that are not in Berlin.
c. All things identical to the Eiffel Tower are not in Berlin.
d. Some things identical to the Eiffel Tower are not things in Berlin.
e. No things identical to the Eiffel Tower are things in Berlin.

ANS: E PTS: 2

Chapter 4 Test F

MULTIPLE CHOICE

Categorical Proposition 1F
Given the categorical proposition:
"Some ID cards that are not easy documents to duplicate are forgeries that are not readily available on the Internet."

1. In Categorical Proposition 1F, the predicate term is:
   a. ID cards that are easy documents to duplicate.
   b. Forgeries that are not readily available on the Internet.
   c. Readily available on the Internet.
   d. Easy documents to duplicate.
   e. Internet.

   ANS: B PTS: 2

2. In Categorical Proposition 1F, the quality is:
   a. Affirmative.
   b. Universal.
   c. Are.
   d. Negative.
   e. Particular.

   ANS: A PTS: 2

3. In Categorical Proposition 1F, the copula is:
   a. Affirmative.
   b. Negative.
   c. Some.
   d. Are not.
   e. Are.

   ANS: E PTS: 2

4. In Categorical Proposition 1F, the quantity is:
   a. Negative.
   b. Affirmative.
   c. Particular.
   d. Some.
   e. Universal.

   ANS: C PTS: 2

5. In Categorical Proposition 1F, which terms are distributed?
   a. The predicate but not the subject.
   b. The subject but not the predicate.
   c. Both the quantifier and the copula.
   d. Neither the subject nor the predicate.
   e. Both the subject and the predicate.

   ANS: D PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

6. Which of the following categorical propositions is in standard form?
   a. Supplying alcohol to minors is a criminal offense.
   b. Many technological innovations are not things that improve the quality of life.
   c. No consumption taxes are fair to the poor.
   d. Some professional sports teams want new stadiums.
   e. All tailor made suits are garments guaranteed to fit.

   ANS: E PTS: 2

7. The statement "Some glass buildings are structures hazardous to birds" is a(n):
   a. **I**-proposition.
   b. **O**-proposition.
   c. **P**-proposition.
   d. **E**-proposition.
   e. **A**-proposition.

   ANS: A PTS: 2

8. Given the categorical proposition "Some police shootings are tragedies that could have been avoided." If the quality but not the quantity is changed, the resulting proposition is:
   a. Some police shootings are tragedies that could not have been avoided.
   b. All police shootings are tragedies that could have been avoided.
   c. No police shootings are tragedies that could have been avoided.
   d. Some police shootings are not tragedies that could have been avoided.
   e. All police shootings are not tragedies that could have been avoided.

   ANS: D PTS: 2

9. Given the categorical proposition "Some psychological quirks are not life-threatening maladies." If both the quality and the quantity are changed, the resulting proposition is:
   a. Some psychological quirks are life-threatening maladies.
   b. All psychological quirks are life-threatening maladies.
   c. Some life-threatening maladies are not psychological quirks.
   d. All psychological quirks are not life-threatening maladies.
   e. No psychological quirks are life-threatening maladies.

   ANS: B PTS: 2

10. Given the categorical proposition "No optical-scan voting machines are devices vulnerable to hackers." If the quantity but not the quality is changed, the resulting proposition is:
    a. Some optical-scan voting machines are not devices vulnerable to hackers.
    b. No optical-scan voting machines are devices that are not vulnerable to hackers.
    c. Some optical-scan voting machines are devices vulnerable to hackers.
    d. All optical-scan voting machines are devices vulnerable to hackers.
    e. No optical-scan voting machines are devices vulnerable to hackers.

    ANS: A PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and an operation/relation to be performed on that statement. You must identify the new statement and the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

11. All A are non-B. (F) Conversion
    a. All non-B are A. (F)
    b. All B are non-A. (Und.)
    c. All non-B are A. (Und.)
    d. No A are non-B. (Und.)
    e. All B are non-A. (F)

    ANS: C PTS: 2

12. Some non-A are B. (T) Subcontrary
    a. All non-A are B. (Und.)
    b. Some non-A are not B. (Und.)
    c. Some non-A are not B. (F)
    d. Some B are non-A. (T)
    e. All non-A are B. (T)

    ANS: B PTS: 2

13. All non-A are B. (F) Contradictory
    a. All non-A are not B. (T)
    b. Some A are not B. (T)
    c. No non-A are B. (Und.)
    d. All non-B are A. (F)
    e. Some non-A are not B. (T)

    ANS: E PTS: 2

14. Some A are non-B. (F) Subalternation
    a. All A are non-B. (Und.)
    b. Some non-B are A. (F)
    c. Some A are not non-B. (T)
    d. All A are non-B. (F)
    e. Some A are not non-B. (Und.)

    ANS: D PTS: 2

15. No A are non-B. (T) Contraposition
    a. All A are non-B. (F)
    b. All A are B. (T)
    c. No B are non-A. (Und.)
    d. No B are non-A. (T)
    e. All A are non-B (Und)

    ANS: C PTS: 2

16. All A are non-B. (F) Obversion
    a. No B are non-A. (Und.)
    b. Some A are not non-B. (T)
    c. All B are non-A. (F)
    d. No A are non-B. (F)
    e. No A are B. (F)

    ANS: E PTS: 2

17. No non-A are non-B. (T) Contrary
    a. All non-A are non-B. (F)

b. All B are A. (Und.)
c. All non-A are B. (T)
d. Some non-A are non-B. (F)
e. All non-A are non-B. (Und.)

ANS: A PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and a new statement. You must determine how the new statement is related to the given statement and determine the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

18. No A are B. (T) Some A are B.
a. Contrary. (F)
b. Contradictory. (F)
c. Conversion. (T)
d. Subcontrary. (Und.)
e. Subalternation. (T)

ANS: B PTS: 2

19. No A are non-B. (F) No non-B are A.
a. Conversion. (F)
b. Contrary. (Und.)
c. Conversion. (Und.)
d. Contraposition. (Und.)
e. Contraposition. (T)

ANS: A PTS: 2

20. Some A are not non-B. (F) Some A are non-B.
a. Contradictory. (T)
b. Contrary. (T)
c. Contrary. (Und.)
d. Subcontrary. (T)
e. Subcontrary. (Und.)

ANS: D PTS: 2

21. All A are B. (F) No A are B.
a. Contrary. (T)
b. Contradictory. (T)
c. Contrary. (Und.)
d. Subcontrary. (T)
e. Subcontrary. (Und.)

ANS: C PTS: 2

22. Some non-A are B. (T) Some non-A are not non-B.
a. Subcontrary. (F)
b. Contraposition. (Und.)
c. Contradictory. (F)
d. Subcontrary. (Und.)
e. Obversion. (T)

ANS: E PTS: 2

23. No non-A are B. (F) Some non-A are not B.
    a. Contradictory. (T)
    b. Subalternation. (Und.)
    c. Subcontrary. (T)
    d. Contrary. (Und.)
    e. Conversion. (F)

    ANS: B PTS: 2

24. Some non-A are not B. (T) Some non-B are not A.
    a. Conversion. (Und.)
    b. Contraposition. (Und.)
    c. Contraposition. (T)
    d. Subcontrary. (F)
    e. Subcontrary. (Und.)

    ANS: C PTS: 2

    INSTRUCTIONS: Select the answer that best characterizes each immediate inference. Adopt the Aristotelian standpoint for these problems.

25. It is false that some cases of genocide are not attacks on humanity. Therefore, it is false that no cases of genocide are attacks on humanity.
    a. Invalid, illicit contrary.
    b. Invalid, illicit subcontrary.
    c. Invalid, illicit subalternation.
    d. Valid.
    e. Invalid, illicit conversion.

    ANS: D PTS: 2

26. It is false that no nurses are health care workers. Therefore, all nurses are health care workers.
    a. Invalid, illicit contrary.
    b. Invalid, illicit subalternation.
    c. Invalid, existential fallacy.
    d. Valid.
    e. Invalid, illicit subcontrary.

    ANS: A PTS: 2

27. No uncooked vegetables are healthy vegetables. Therefore, no unhealthy vegetables are cooked vegetables.
    a. Invalid, illicit obversion.
    b. Valid.
    c. Invalid, illicit conversion.
    d. Invalid, illicit contrary.
    e. Invalid, illicit contraposition.

    ANS: E PTS: 2

28. No headless horsemen are keen sighted riders. Therefore, no keen sighted riders are headless horsemen.
    a. Invalid, illicit contrary.
    b. Valid.

c. Invalid, illicit conversion.
d. Invalid, illicit contraposition.
e. Invalid, existential fallacy.

ANS: B PTS: 2

29. All proponents of globalization are individuals unconcerned with world poverty. Therefore, all individuals concerned with world poverty are opponents of globalization.
a. Valid.
b. Invalid, illicit conversion.
c. Invalid, illicit contrary.
d. Invalid, illicit obversion.
e. Invalid, illicit contraposition.

ANS: A PTS: 2

30. Some reclusive gnomes are not playful sprites. Therefore, some playful sprites are not reclusive gnomes.
a. Invalid, existential fallacy.
b. Invalid, illicit subcontrary.
c. Invalid, illicit conversion.
d. Invalid, illicit contraposition.
e. Valid.

ANS: C PTS: 2

31. It is false that some cherry cobblers are desserts that contain anchovies. Therefore, some cherry cobblers are not desserts that contain anchovies.
a. Invalid, illicit contrary.
b. Invalid, illicit subalternation.
c. Invalid, illicit subcontrary.
d. Valid.
e. Invalid, illicit conversion.

ANS: D PTS: 2

32. No fashion shows are events without models. Therefore, all fashion shows are events with models.
a. Invalid, illicit contraposition.
b. Invalid, illicit obversion.
c. Invalid, existential fallacy.
d. Invalid, illicit contrary.
e. Valid.

ANS: E PTS: 2

33. Some film stars are not Oscar winners. Therefore, some film stars are Oscar winners.
a. Invalid, illicit subalternation.
b. Invalid, illicit subcontrary.
c. Invalid, illicit contradictory.
d. Valid.
e. Invalid, illicit contrary.

ANS: B PTS: 2

34. No credit card companies are supporters of consumer rights. Therefore, it is false that all credit card companies are supporters of consumer rights.

a. Invalid, illicit subcontrary.
b. Invalid, illicit contrary.
c. Valid.
d. Invalid, illicit subalternation.
e. Invalid, illicit conversion.

ANS: C PTS: 2

35. It is false that some charming nymphs are not winged fairies. Therefore, some charming nymphs are winged fairies.
a. Invalid, illicit contrary.
b. Invalid, existential fallacy.
c. Invalid, illicit subalternation.
d. Valid.
e. Invalid, illicit subcontrary.

ANS: B PTS: 2

36. Some toxic waste dumps are environmental hazards. Therefore, all toxic waste dumps are environmental hazards.
a. Valid.
b. Invalid, illicit subalternation.
c. Invalid, illicit subcontrary.
d. Invalid, existential fallacy.
e. Invalid, illicit contrary.

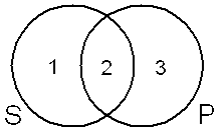
ANS: B PTS: 2

37. It is false that no bats are animals that carry rabies. Therefore, some bats are animals that carry rabies.
a. Valid.
b. Invalid, illicit contrary.
c. Invalid, illicit subalternation.
d. Invalid, existential fallacy.
e. Invalid, illicit subcontrary.

ANS: A PTS: 2

INSTRUCTIONS: Fill in the Venn diagram for each statement.

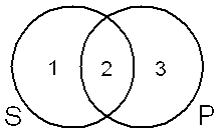
38. Some S are P. (Boolean standpoint)



After filling in the diagram,
a. Area 1 is shaded, and there is an X in Area 2.
b. Areas 1 and 3 are shaded.
c. There is an X in Area 2, and there are no other marks.
d. There is an X in Area 1, and there are no other marks.
e. Area 2 is shaded, and there are no other marks.

ANS: C PTS: 2

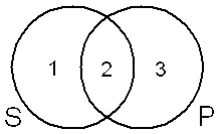
39. All S are P. (Aristotelian standpoint)



After filling in the diagram,
a. Area 3 is shaded, and there are no other marks.
b. Areas 1 and 3 are shaded.
c. Area 1 is shaded, and there are no other marks.
d. Area 1 is shaded, and there is a circled X in Area 2.
e. There is a circled X in Area 2, and there are no other marks.

ANS: D PTS: 2

40. No S are P. (Boolean standpoint)



After filling in the diagram,
a. Area 1 is shaded, and there are no other marks.
b. Areas 2 and 3 are shaded.
c. Area 2 is shaded, and there is a circled X in Area 1.
d. There is an X in Area 2, and there are no other marks.
e. Area 2 is shaded, and there are no other marks.

ANS: E PTS: 2

INSTRUCTIONS: Select the answer that best translates the statement into a standard form categorical proposition.

41. She eats when she's hungry.
a. Some times she's hungry are times she eats.
b. Some times she's hungry are times she does not eat.
c. All times she eats are times she's hungry.
d. All times she's hungry are times she eats.
e. No times she's not hungry are times she eats.

ANS: D PTS: 2

42. Not every student will graduate.
a. Some students will not graduate.
b. All students are not persons who will graduate.
c. Some students are not persons who will graduate.
d. Some persons who will graduate are not students.
e. Some persons who will not graduate are persons other than students.

ANS: C PTS: 2

43. Canaries are chirping in the aviary.
a. All canaries are birds chirping in the aviary.

b. Some canaries are birds chirping in the aviary.
c. Some birds chirping in the aviary are not canaries.
d. Some canaries are chirping in the aviary.
e. All birds chirping in the aviary are canaries.

ANS: B PTS: 2

44. Novels are not enjoyable unless they are well written.
a. All enjoyable novels are well written novels.
b. Some enjoyable novels are well written novels.
c. All well written novels are enjoyable novels.
d. No novels that are not enjoyable are well written novels.
e. Some novels that are not well written are novels that are not enjoyable.

ANS: A PTS: 2

45. An avocado is not a vegetable.
a. All avocados are not vegetables.
b. No things identical to avocados are things identical to vegetables.
c. No avocados are vegetables.
d. No vegetables are things like avocados.
e. Some avocados are not vegetables.

ANS: C PTS: 2

46. Valentine's Day is in February.
a. All Valentine's Days are in February.
b. No days that are not in February are days that are not identical to Valentine's Day.
c. All days identical to Valentine's Day are in February.
d. All days identical to Valentine's Day are days in February.
e. Some days in February are days identical to Valentine's Day.

ANS: D PTS: 2

47. Only confident people are successful.
a. All successful people are confident people.
b. Some people who are not confident are people who are not successful.
c. Some successful people are confident people.
d. All confident people are successful people.
e. No unsuccessful people are confident people.

ANS: A PTS: 2

48. There are potatoes in the soup.
a. All potatoes are things in the soup.
b. Some potatoes are things in the soup and some things that are not potatoes are things in the soup.
c. Some things in the soup are not potatoes.
d. All things in the soup are not potatoes.
e. Some potatoes are things in the soup.

ANS: E PTS: 2

49. If it quacks, it's a duck.
a. All ducks quack.
b. Some animals that are not ducks are animals that do not quack.

c. All ducks are animals that quack.
d. Some ducks are animals that quack.
e. All animals that quack are ducks.

ANS: E PTS: 2

50. A few flights are available.
a. Some flights are available.
b. Some flights are things that are available.
c. Some flights are things that are available and some flights are not things that are available.
d. Some flights are not things that are available.
e. All flights are not available.

ANS: B PTS: 2

Chapter 4 Test G

MULTIPLE CHOICE

Categorical Proposition 1G
Given the categorical proposition:
"Some paintings that are not characteristic of the Byzantine period are works that are not being auctioned by Christie's."

1. In Categorical Proposition 1G, the predicate term is:
   a. Paintings that are not characteristic of the Byzantine period.
   b. Auctioned by Christie's.
   c. Works that are not being auctioned by Christie's.
   d. Works.
   e. None of these.

   ANS: C PTS: 2

2. In Categorical Proposition 1G, the copula is:
   a. Being auctioned.
   b. Are not.
   c. Some.
   d. None of these.
   e. Are.

   ANS: E PTS: 2

3. In Categorical Proposition 1G, the quantity is:
   a. Affirmative.
   b. Particular.
   c. Universal.
   d. Some.
   e. None of these.

   ANS: B PTS: 2

4. In Categorical Proposition 1G, the quality is:
   a. Universal.
   b. Particular.
   c. Negative.
   d. None of the others.
   e. Undistributed

   ANS: D PTS: 2

5. In Categorical Proposition 1G:
   a. The subject term is undistributed and the predicate term is distributed.
   b. The subject term is distributed and the predicate term is undistributed.
   c. The subject term is universal and the predicate term is particular.
   d. Both the subject term and the predicate term are distributed.
   e. Both the subject term and the predicate term are undistributed.

   ANS: E PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

6. Which of the following categorical propositions is in standard form?
   a. No harpsichords are things made of aluminum.
   b. Some chamber works will not be performed at the festival.
   c. Some sculptors work only with marble.
   d. Not all poems by Milton are sonnets.
   e. Good screenwriters are usually well-paid.

   ANS: A PTS: 2

7. The categorical proposition "Some admirers of Bertolt Brecht are not avid theater-goers" is an:
   a. **E**-type.
   b. **U**-type.
   c. **I**-type.
   d. **O**-type.
   e. **A**-type.

   ANS: D PTS: 2

8. Given the categorical proposition "No musicians are steam fitters." If the quality but not the quantity is changed, the resulting proposition is:
   a. All musicians are steam fitters.
   b. All musicians are not steam fitters.
   c. Some musicians are steam fitters.
   d. Some musicians are not steam fitters.
   e. All steam fitters are musicians.

   ANS: A PTS: 2

9. Given the categorical proposition "Some mathematicians are not topologists." If the quantity but not the quality is changed, the resulting proposition is:
   a. Some non-mathematicians are topologists.
   b. Some mathematicians are topologists.
   c. No mathematicians are topologists.
   d. Some mathematicians are non-topologists.
   e. All mathematicians are topologists.

   ANS: C PTS: 2

10. Given the categorical proposition "All biologists are scientists." If both the quality and the quantity are changed, the resulting proposition is:
    a. Some scientists are not biologists.
    b. Some biologists are not scientists.
    c. No biologists are scientists.
    d. Some biologists are scientists.
    e. All biologists are not scientists.

    ANS: B PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and an operation/relation to be performed on that statement. You must identify the new statement and the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

11. No A are non-B. (F) Contrary
    a. No non-B are A. (F)
    b. No non-B are A. (T)
    c. Some A are non-B. (T)
    d. All A are non-B. (Und.)
    e. All A are non-B. (T)

    ANS: D PTS: 2

12. Some A are B. (T) Obversion
    a. Some B are A. (T)
    b. Some non-B are non-A. (T)
    c. Some A are not non-B. (T)
    d. Some non-A are not non-B. (T)
    e. Some non-A are not B. (Und.)

    ANS: C PTS: 2

13. All non-A are B. (T) Subalternation
    a. Some A are non-B. (T)
    b. Some non-A are B. (T)
    c. Some A are not B. (F)
    d. No non-A are B. (F)
    e. Some A are B. (T)

    ANS: B PTS: 2

14. Some A are not non-B. (T) Subcontrary
    a. Some A are non-B. (Und.)
    b. No A are non-B. (Und.)
    c. All A are non-B. (Und.)
    d. Some A are B. (F)
    e. Some A are non-B. (F)

    ANS: A PTS: 2

15. Some non-A are B. (T) Contradictory
    a. Some A are not B. (Und.)
    b. All non-A are B. (F)
    c. Some non-A are not B. (F)
    d. No non-B are A. (F)
    e. No non-A are B. (F)

    ANS: E PTS: 2

16. Some A are not B. (F) Contraposition
    a. Some B are not A. (Und.)
    b. Some B are not non-A. (F)
    c. Some A are B. (T)
    d. Some non-B are not non-A. (F)
    e. Some non-B are not non-A. (Und.)

    ANS: D PTS: 2

17. All A are non-B. (F) Conversion
    a. All B are non-A. (Und.)

b. No A are non-B. (Und.)
c. All non-B are A. (Und.)
d. Some A are not non-B. (T)
e. All non-B are A. (F)

ANS: C PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and a new statement. You must determine how the new statement is related to the given statement and determine the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

18. Some non-A are B. (F) Some non-B are A.
a. Conversion. (F)
b. Obversion. (F)
c. Conversion. (T)
d. Contraposition. (F)
e. Contraposition. (Und.)

ANS: E PTS: 2

19. Some A are non-B. (F) Some A are not non-B.
a. Contrary. (Und.)
b. Subcontrary. (T)
c. Contradictory. (T)
d. Contraposition. (F)
e. Subalternation. (F)

ANS: B PTS: 2

20. No A are non-B. (T) No non-B are A.
a. Conversion. (T)
b. Conversion. (F)
c. Contraposition. (Und.)
d. Conversion. (Und.)
e. Obversion. (T)

ANS: A PTS: 2

21. All non-A are B. (T) No non-A are B.
a. Contraposition. (Und.)
b. Contrary. (Und.)
c. Obversion. (T)
d. Contraposition. (T)
e. Contrary. (F)

ANS: E PTS: 2

22. Some A are not B. (T) No A are B.
a. Subalternation. (Und.)
b. Subcontrary. (Und.)
c. Obversion. (T)
d. Contraposition. (T)
e. Contradictory. (F)

ANS: A PTS: 2

23. All non-A are B. (F) No non-A are non-B.
    a. Contradictory. (T)
    b. Contrary. (Und.)
    c. Obversion. (F)
    d. Contraposition. (F)
    e. Contrary. (T)

    ANS: C PTS: 2

24. Some A are not non-B. (F) All A are non-B.
    a. Obversion. (F)
    b. Subalternation. (F)
    c. Subalternation. (Und.)
    d. Contradictory. (T)
    e. Contrary. (T)

    ANS: D PTS: 2

    INSTRUCTIONS: Select the answer that best characterizes each argument. Adopt the Aristotelian standpoint.

25. All mermaids are swimmers. Therefore, no mermaids are non-swimmers.
    a. Invalid; illicit obversion.
    b. Valid; no fallacy.
    c. Invalid; existential fallacy.
    d. Invalid; illicit contrary.
    e. Invalid; illicit contraposition.

    ANS: B PTS: 2

26. Some rabbits are not birds. Therefore, no rabbits are birds.
    a. Valid; existential fallacy.
    b. Invalid; illicit conversion.
    c. Invalid; illicit subalternation.
    d. Valid; no fallacy.
    e. Invalid; illicit contrary.

    ANS: C PTS: 2

27. No unicorns are goats. Therefore, it is false that all unicorns are goats.
    a. Invalid; illicit contraposition.
    b. Invalid; illicit contrary.
    c. Valid; no fallacy.
    d. Invalid; illicit subalternation.
    e. Invalid; existential fallacy.

    ANS: E PTS: 2

28. It is false that some leprechauns are Englishmen. Therefore, no leprechauns are Englishmen.
    a. Invalid; existential fallacy.
    b. Valid; no fallacy.
    c. Invalid; illicit contradiction.
    d. Invalid; illicit subalternation.
    e. Invalid; illicit conversion.

ANS: B PTS: 2

29. It is false that no blue jays are pesky creatures. Therefore, all blue jays are pesky creatures.
    a. Valid; no fallacy.
    b. Invalid; illicit subcontrary.
    c. Invalid; illicit contrary.
    d. Invalid; existential fallacy.
    e. Valid; illicit subalternation.

    ANS: C PTS: 2

30. Some hectic vacations are not pleasant experiences. Therefore, some unpleasant experiences are not relaxed vacations.
    a. Valid; no fallacy.
    b. Invalid; existential fallacy.
    c. Invalid; illicit subcontrary.
    d. Invalid; illicit contrary.
    e. Invalid; illicit contraposition.

    ANS: A PTS: 2

31. Some politicians are not statesmen. Therefore, some politicians are statesmen.
    a. Valid; no fallacy.
    b. Valid; unnamed fallacy.
    c. Invalid; illicit subalternation.
    d. Invalid; illicit contraposition.
    e. Invalid; illicit subcontrary.

    ANS: E PTS: 2

32. No talented actors are unpopular performers. Therefore, no popular performers are untalented actors.
    a. Valid; no fallacy.
    b. Invalid; illicit conversion.
    c. Invalid; illicit contrary.
    d. Invalid; illicit contraposition.
    e. Invalid; illicit obversion.

    ANS: D PTS: 2

33. It is false that some teacups are flowerpots. Therefore, some teacups are not flowerpots.
    a. Valid; no fallacy.
    b. Invalid; illicit subcontrary.
    c. Invalid; illicit subalternation.
    d. Invalid; illicit conversion.
    e. Invalid; existential fallacy.

    ANS: A PTS: 2

34. Some trolls are not alligators. Therefore, some alligators are not trolls.
    a. Invalid; illicit contraposition.
    b. Invalid; illicit subcontrary.
    c. Invalid; illicit conversion.
    d. Invalid; existential fallacy.
    e. Valid; no fallacy.

    ANS: C PTS: 2

35. Some butterflies are not non-birds. Therefore, some butterflies are birds.
    a. Invalid; existential fallacy.
    b. Invalid; illicit contraposition.
    c. Invalid; illicit subalternation.
    d. Valid; no fallacy.
    e. Invalid; illicit subcontrary.

    ANS: D PTS: 2

36. It is false that no genetic experiments are ethical procedures. Therefore, all genetic experiments are ethical procedures.
    a. Valid; no fallacy.
    b. Invalid; illicit conversion.
    c. Invalid; existential fallacy.
    d. Invalid; illicit subcontrary.
    e. Invalid; illicit contrary.

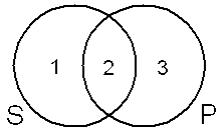
    ANS: E PTS: 2

37. It is false that some headless horsemen are not agile individuals. Therefore, it is false that no headless horsemen are agile individuals.
    a. Invalid; illicit contrary.
    b. Invalid; existential fallacy.
    c. Valid; no fallacy.
    d. Invalid; illicit subalternation.
    e. Valid; existential fallacy.

    ANS: B PTS: 2

    INSTRUCTIONS: Fill in the Venn diagram for each statement.

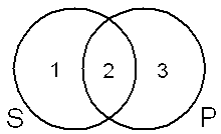
38. Some S are not P. (Boolean standpoint)



    After filling in the Venn diagram,
    a. There is an X in Area 2.
    b. There is an X in Area 1.
    c. Area 1 is shaded.
    d. Area 2 is shaded, and there are no other marks.
    e. Area 2 is shaded, and there is a circled X in area 1.

    ANS: B PTS: 2

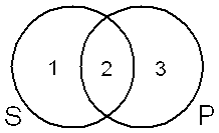
39. No S are P. (Aristotelian standpoint)



After filling in the Venn diagram,
a. Area 2 is shaded, and there are no other marks.
b. There is an X in Area 2.
c. Area 2 is shaded, and there is a circled X in Area 1.
d. Area 3 is shaded, and there is a circled X in Area 2.
e. Area 1 is shaded.

ANS: C PTS: 2

40. All S are P. (Boolean standpoint)



After filling in the Venn diagram,
a. Area 1 is shaded and there are no other marks.
b. Area 1 is shaded and there is a circled X in Area 2.
c. Area 2 is shaded.
d. Area 3 is shaded.
e. There is an X in Area 1.

ANS: A PTS: 2

INSTRUCTIONS: Select the best translation for each categorical proposition.

41. Birds are not mammals.
a. All birds are not mammals.
b. Some mammals are not birds.
c. No non-mammals are birds.
d. No things identical to birds are things identical to mammals.
e. No birds are mammals.

ANS: E PTS: 2

42. None but students are eligible.
a. All students are eligible persons.
b. No students are eligible persons.
c. No students are eligible persons, and all non-students are eligible persons.
d. All eligible persons are students.
e. All ineligible persons are non-students.

ANS: D PTS: 2

43. Alligators live in the Everglades.
a. Some animals that live in the Everglades are not alligators.
b. Some alligators are animals that live in the Everglades and some alligators are not animals that live in the Everglades.
c. Some alligators are animals that live in the Everglades.
d. Some animals identical to alligators are animals that live in the Everglades.
e. All alligators are animals that live in the Everglades.

ANS: C PTS: 2

44. Not all parrots are colorful.
    a. Some parrots are not colorful birds.
    b. Some parrots are colorful birds and some parrots are not colorful birds.
    c. Some parrots are not colorful.
    d. Some colorful birds are not parrots.
    e. All parrots are not colorful birds.

    ANS: A PTS: 2

45. The only plants in this garden are weeds.
    a. All weeds are plants in this garden.
    b. All plants in this garden are weeds.
    c. All plants in this garden are things identical to weeds.
    d. Some weeds are not plants in this garden.
    e. All weeds are the only plants in this garden.

    ANS: B PTS: 2

46. President Kennedy was assassinated.
    a. All persons identical to President Kennedy are persons who were assassinated.
    b. All persons identical to President Kennedy were assassinated persons.
    c. No persons who were not assassinated are persons not identical to President Kennedy.
    d. Some persons identical to President Kennedy are persons who were assassinated.
    e. All persons like president Kennedy are persons who were assassinated.

    ANS: A PTS: 2

47. There is a cat on the roof.
    a. All animals on the roof are cats.
    b. All cats are animals on the roof.
    c. Some cats are animals on the roof and some cats are not animals on the roof.
    d. Some cats are animals on the roof.
    e. Some things identical to a roof are places there is a cat.

    ANS: D PTS: 2

48. If something isn't a conductor then it isn't made of metal.
    a. No things not made of metal are conductors.
    b. If something is made of metal then it is a conductor.
    c. All things made of metal are conductors.
    d. All non-conductors are not things made of metal.
    e. All conductors are things made of metal.

    ANS: C PTS: 2

49. All books except novels are boring to read.
    a. No novels are books boring to read.
    b. All books boring to read are books that are not novels.
    c. Some novels are not books boring to read.
    d. All books that are not boring to read are books that are novels.
    e. No novels are books boring to read, and all books that are not novels are books boring to read.

    ANS: E PTS: 2

50. She says what she pleases.

a. All persons identical to her say what they please.
b. All things she pleases to say are things she says.
c. Some things are things she pleases to say, and some things are not things she pleases to say.
d. All things she says are things she pleases to say.
e. Some things she says are things she pleases to say.

ANS: B PTS: 2

Chapter 4 Test H

MULTIPLE CHOICE

Categorical Proposition 1H
Given the categorical proposition:
"All urns that are not made of marble are articles that are currently on sale."

1. In Categorical Proposition 1H, the subject term is:
   a. Articles.
   b. Urns that are not made of marble.
   c. Articles that are currently on sale.
   d. Urns.
   e. Made of marble.

   ANS: B PTS: 2

2. In Categorical Proposition 1H, the predicate term is:
   a. Articles that are currently on sale.
   b. Articles.
   c. Urns that are not made of marble.
   d. Currently on sale.
   e. Made of marble.

   ANS: A PTS: 2

3. In Categorical Proposition 1H, the copula is:
   a. Are not.
   b. Made.
   c. Are.
   d. All.
   e. Not.

   ANS: C PTS: 2

4. In Categorical Proposition 1H, the quantity is:
   a. Particular.
   b. Negative.
   c. Affirmative.
   d. Universal.
   e. All.

   ANS: D PTS: 2

5. In Categorical Proposition 1H, the quality is:
   a. Negative.
   b. Are.
   c. Affirmative.
   d. Universal.
   e. Particular.

   ANS: C PTS: 2

6. In Categorical Proposition 1H:

a. Both the subject term and the predicate term are undistributed.
b. The subject term is undistributed and the predicate term is distributed.
c. The subject term is universal and the predicate term is particular.
d. Both the subject term and the predicate term are distributed.
e. The subject term is distributed and the predicate term is undistributed.

ANS: E PTS: 2

7. Categorical Proposition 1H is an:
a. **A**-type.
b. **U**-type.
c. **I**-type.
d. **O**-type.
e. **E**-type.

ANS: A PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

8. Given the categorical proposition "Some allergies are not mortal afflictions." If the quality but not the quantity is changed, the resulting proposition is:
a. No allergies are mortal afflictions.
b. No allergies are not mortal afflictions.
c. All allergies are mortal afflictions.
d. Some allergies are mortal afflictions.
e. All allergies are not mortal afflictions.

ANS: D PTS: 2

9. Given the categorical proposition "All smugglers are shady characters." If the quantity but not the quality is changed, the resulting proposition is:
a. No smugglers are not shady characters.
b. Some smugglers are not shady characters.
c. All smugglers are not shady characters.
d. No smugglers are shady characters.
e. Some smugglers are shady characters.

ANS: E PTS: 2

10. Given the categorical proposition "Some fathers are responsible parents." If both the quality and the quantity are changed, the resulting proposition is:
a. All fathers are responsible parents.
b. Some fathers are irresponsible parents.
c. No fathers are responsible parents.
d. No fathers are not irresponsible parents.
e. Some fathers are not responsible parents.

ANS: C PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and an operation/relation to be performed on that statement. You must identify the new statement and the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

11. No A are non-B. (T) Subalternation

a. Some A are non-B. (Und.)
b. Some A are not non-B. (T)
c. Some A are not B. (T)
d. No non-B are A. (T)
e. Some A are not non-B. (F)

ANS: B PTS: 2

12. Some non-A are not B. (F) Contraposition
a. Some B are not A. (F)
b. Some B are not non-A. (T)
c. Some non-B are non-A. (F)
d. Some A are not non-B. (T)
e. Some non-B are not A. (F)

ANS: E PTS: 2

13. Some non-A are B. (F) Contradiction
a. No non-A are B. (T)
b. All non-A are not B. (F)
c. Some non-B are A. (Und.)
d. Some non-A are not B. (F)
e. No A are non-B. (F)

ANS: A PTS: 2

14. All A are non-B. (F) Contrary
a. No A are non-B. (Und.)
b. Some A are not B. (T)
c. No A are non-B. (T)
d. No non-B are A. (F)
e. No A are B. (Und.)

ANS: A PTS: 2

15. No A are non-B. (T) Obversion
a. No non-B are A. (T)
b. No A are B. (F)
c. All non-A are B. (T)
d. All A are B. (T)
e. All non-A are non-B. (F)

ANS: D PTS: 2

16. Some non-A are not B. (F) Subcontrary
a. No non-A are B. (F)
b. Some non-A are B. (T)
c. Some A are B. (T)
d. Some A are B. (Und.)
e. Some non-A are B. (Und.)

ANS: B PTS: 2

17. All A are non-B. (F) Conversion
a. All B are non-A. (Und.)
b. All non-A are B. (F)

c. All non-B are A. (Und.)
d. No A are B. (F)
e. No A are non-B. (Und.)

ANS: C PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and a new statement. You must determine how the new statement is related to the given statement and determine the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

18. All A are non-B. (F) No A are B.
a. Contrary. (Und.)
b. Obversion. (F)
c. Conversion. (Und.)
d. Subalternation. (T)
e. Contradictory. (T)

ANS: B PTS: 2

19. No A are B. (T) All A are B.
a. Contrary. (F)
b. Contradictory. (F)
c. Obversion. (T)
d. Conversion. (T)
e. Subcontrary. (Und.)

ANS: A PTS: 2

20. Some A are non-B. (T) All A are non-B.
a. Subalternation. (T)
b. Subcontrary. (Und.)
c. Contraposition. (Und.)
d. Subalternation. (Und.)
e. Contradictory. (F)

ANS: D PTS: 2

21. Some A are non-B. (T) Some non-B are A.
a. Contraposition. (T)
b. Subcontrary. (Und.)
c. Contraposition. (Und.)
d. Obversion. (T)
e. Conversion. (T)

ANS: E PTS: 2

22. No non-A are non-B. (F) No B are A.
a. Contraposition. (Und.)
b. Conversion. (Und.)
c. Conversion. (F)
d. Contrary. (Und.)
e. Contraposition. (F)

ANS: A PTS: 2

23. No A are B. (T) Some A are B.
    a. Contraposition. (Und.)
    b. Subalternation. (T)
    c. Conversion. (T)
    d. Contrary. (F)
    e. Contradiction. (F)

    ANS: E PTS: 2

24. Some non-A are not B. (T) Some non-A are B.
    a. Contradiction. (F)
    b. Conversion. (Und.)
    c. Subcontrary. (Und.)
    d. Contraposition. (T)
    e. Obversion. (T)

    ANS: C PTS: 2

    INSTRUCTIONS: Select the answer that best characterizes each immediate inference. Adopt the Aristotelian standpoint for these problems.

25. No ballerinas are awkward dancers. Therefore, it is false that all ballerinas are awkward dancers.
    a. Invalid, illicit conversion.
    b. Invalid, illicit contrary.
    c. Invalid, illicit subalternation.
    d. Valid, no fallacy.
    e. Invalid, existential fallacy.

    ANS: D PTS: 2

26. It is false that some gothic cathedrals are not rich legacies. Therefore, some gothic cathedrals are rich legacies.
    a. Invalid, illicit conversion.
    b. Invalid, illicit subcontrary.
    c. Valid, no fallacy.
    d. Invalid, illicit subalternation.
    e. Invalid, existential fallacy.

    ANS: C PTS: 2

27. Some friendly gnomes are creatures that live below ground. Therefore, some creatures that live above ground are unfriendly gnomes.
    a. Invalid, illicit conversion.
    b. Invalid, illicit contraposition.
    c. Invalid, existential fallacy.
    d. Invalid, illicit subcontrary.
    e. Valid, no fallacy.

    ANS: B PTS: 2

28. Some gold watches are retirement gifts. Therefore, it is false that no gold watches are retirement gifts.
    a. Invalid, illicit contrary.
    b. Valid, no fallacy.
    c. Invalid, illicit subcontrary.
    d. Invalid, Illicit subalternation.

e. Invalid, illicit conversion.

ANS: B PTS: 2

29. It is false that all cowboys are romantic icons. Therefore, no cowboys are romantic icons.
a. Valid, no fallacy.
b. Invalid, illicit subalternation.
c. Invalid, illicit contrary.
d. Invalid, illicit conversion.
e. Invalid, existential fallacy.

ANS: C PTS: 2

30. Some flying horses are dependable steeds. Therefore, some dependable steeds are flying horses.
a. Invalid, existential fallacy.
b. Invalid, illicit conversion.
c. Invalid, illicit contrary.
d. Valid, no fallacy.
e. Invalid, illicit obversion.

ANS: D PTS: 2

31. It is false that no sunsets are glorious scenes. Therefore, it is false that some sunsets are not glorious scenes.
a. Invalid, illicit subalternation.
b. Invalid, illicit contraposition.
c. Valid, no fallacy.
d. Invalid, illicit subcontrary.
e. Invalid, illicit conversion.

ANS: A PTS: 2

32. It is false that some two-hundred pound mice are warthogs. Therefore, it is false that all two-hundred pound mice are warthogs.
a. Invalid, illicit conversion.
b. Invalid, illicit subalternation.
c. Invalid, illicit subcontrary.
d. Valid, no fallacy.
e. Invalid, existential fallacy.

ANS: E PTS: 2

33. Some poets are sensitive souls. Therefore, some poets are not insensitive souls.
a. Invalid, illicit contraposition.
b. Invalid, illicit subcontrary.
c. Invalid, illicit subalternation.
d. Valid, no fallacy.
e. Invalid, illicit conversion.

ANS: D PTS: 2

34. All pizzas are high calorie meals. Therefore, some pizzas are high calorie meals.
a. Invalid, existential fallacy.
b. Valid, no fallacy.
c. Invalid, illicit contrary.
d. Invalid, illicit subalternation.

e. Invalid, illicit subcontrary.

ANS: B PTS: 2

35. All charitable contributions are tax-deductible gifts. Therefore, all tax-deductible gifts are charitable contributions.
a. Invalid, illicit contrary.
b. Valid, no fallacy.
c. Invalid, illicit conversion.
d. Invalid, illicit obversion.
e. Invalid, existential fallacy.

ANS: C PTS: 2

36. Some pacific islands are tropical gardens. Therefore, some pacific islands are not tropical gardens.
a. Invalid, illicit contraposition.
b. Invalid, illicit subalternation.
c. Valid, no fallacy.
d. Invalid, illicit subcontrary.
e. Invalid, illicit contrary.

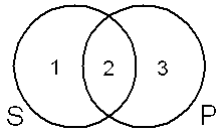
ANS: D PTS: 2

37. No toruks are flightless predators. Therefore, all toruks are flying predators.
a. Valid, no fallacy.
b. Invalid, illicit contrary.
c. Invalid, illicit subalternation.
d. Invalid, illicit contraposition.
e. Invalid, existential fallacy.

ANS: A PTS: 2

INSTRUCTIONS: Fill in the Venn diagram for each statement.

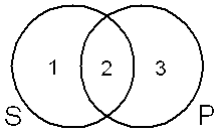
38. Some S are P. (Boolean standpoint)



After filling in the Venn diagram,
a. There is an X in Area 3.
b. Area 1 is shaded, and there is an X in Area 2.
c. There is a circled X in Area 2.
d. There is an X in Area 2, and there are no other marks.
e. There is an X in Area 1, and there are no other marks.

ANS: D PTS: 2

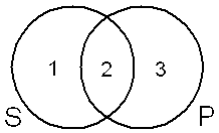
39. All S are P. (Aristotelian standpoint)



After filling in the Venn diagram,
a. Area 2 is shaded, and there are no other marks.
b. Area 3 is shaded, and there is a circled X in Area 2.
c. Area 2 is shaded, and there is a circled X in Area 1.
d. There is an X in Area 2, and there are no other marks.
e. Area 1 is shaded, and there is a circled X in Area 2.

ANS: E PTS: 2

40. No S are P. (Boolean standpoint.)



After filling in the Venn diagram,
a. Area 2 is shaded, and there is a circled X in Area 1.
b. Area 2 is shaded, and there is an X in Area 1.
c. Area 2 is shaded, and there are no other marks.
d. Area 1 is shaded, and there are no other marks.
e. Area 2 is shaded, and there is an X in Area 3.

ANS: C PTS: 2

INSTRUCTIONS: Select the best translation for each categorical proposition.

41. A few heroes are not recognized.
a. Some heroes are recognized persons, and some heroes are not recognized persons.
b. Some heroes are not recognized persons.
c. Some heroes are recognized persons.
d. Some recognized persons are not heroes.
e. Some heroes are not recognized.

ANS: B PTS: 2

42. Not all birds can fly.
a. Some birds are not animals that can fly.
b. All birds are not animals that can fly.
c. Some birds are animals that can fly.
d. Some birds cannot fly.
e. Some animals that can fly are not birds.

ANS: A PTS: 2

43. Only astronomers are allowed in the observatory.
a. Some astronomers are persons allowed in the observatory.
b. Some persons allowed in the observatory are astronomers.
c. All astronomers are persons allowed in the observatory.
d. No astronomers are persons not allowed in the observatory.

e. All persons allowed in the observatory are astronomers.

ANS: E PTS: 2

44. All the musicians except the violinists are practicing.
    a. All violinists are musicians who are practicing and no non-violinists are musicians who are practicing.
    b. Some violinists are practicing and some violinists are not practicing.
    c. No violinists are musicians who are practicing.
    d. No violinists are musicians who are practicing and all musicians who are not violinists are musicians who are practicing.
    e. All non-violinists are musicians who are practicing.

    ANS: D PTS: 2

45. The only flowers she grows are daisies.
    a. All things identical to daisies grown by her are flowers.
    b. All flowers she grows are daisies.
    c. All daisies she grows are flowers.
    d. Some flowers she grows are daisies.
    e. No flowers not grown by her are daisies.

    ANS: B PTS: 2

46. Vienna is not in Hungary.
    a. No cities identical to Vienna are cities in Hungary.
    b. All cities identical to Vienna are not cities in Hungary.
    c. Vienna is not a city in Hungary.
    d. All countries identical to Hungary are not countries that contain Vienna.
    e. Some cities identical to Vienna are not cities in Hungary.

    ANS: A PTS: 2

47. There is a hotel in the village.
    a. Some hotels are things in the village, and some hotels are not things in the village.
    b. Some hotels are things in the village.
    c. Some hotels are not things in the village.
    d. All hotels are things in the village.
    e. No hotels are not things in the village.

    ANS: B PTS: 2

48. She buys whatever catches her eye.
    a. All things that do not catch her eye are things she does not buy.
    b. Some things she buys are things that catch her eye.
    c. All things she buys are things that catch her eye.
    d. No things that do not catch her eye are things she buys.
    e. All things that catch her eye are things she buys.

    ANS: E PTS: 2

49. A dog barked.
    a. Some dogs are not animals that barked.
    b. Some dogs barked, and some dogs did not bark.
    c. All dogs are animals that barked.
    d. Some dogs are animals that barked.

e. Some animals identical to a dog are animals that barked.

ANS: D PTS: 2

50. Meerkats are not lizards.
    a. No things identical to a meerkat are things identical to lizards.
    b. All meerkats are not lizards.
    c. No meerkats are lizards.
    d. All lizards are not meerkats.
    e. No meerkats are things that are not lizards.

ANS: C PTS: 2

Chapter 4 Test I

MULTIPLE CHOICE

Categorical Proposition 1I
Given the categorical proposition:
"Some houseboats that are leaky are not vessels that are safe dwellings."

1. In Categorical Proposition 1I, the subject term is:
   a. Houseboats.
   b. Leaky vessels.
   c. Vessels that are safe dwellings.
   d. Safe dwellings.
   e. Houseboats that are leaky vessels.

   ANS: E PTS: 2

2. In Categorical Proposition 1I, the copula is:
   a. Are not.
   b. Some.
   c. Are.
   d. Negative.
   e. Vessels that are safe dwellings.

   ANS: A PTS: 2

3. In Categorical Proposition 1I, the quantifier is:
   a. Universal.
   b. Particular.
   c. Are.
   d. Some.
   e. Are not.

   ANS: D PTS: 2

4. In Categorical Proposition 1I, the quantity is:
   a. Affirmative.
   b. Particular.
   c. Universal.
   d. Negative.
   e. Some.

   ANS: B PTS: 2

5. In Categorical Proposition 1I, the quality is:
   a. Affirmative.
   b. Universal.
   c. Negative.
   d. Not.
   e. Particular

   ANS: C PTS: 2

6. In Categorical Proposition 1I:

a. The subject term is universal and the predicate term is particular.
b. The subject term is distributed and the predicate term is undistributed.
c. The subject term is undistributed and the predicate term is distributed.
d. Both the subject term and the predicate term are distributed.
e. Both the subject term and the predicate term are undistributed.

ANS: C PTS: 2

7. Categorical Proposition 1I is an:
a. **E**-type.
b. **U**-type.
c. **I**-type.
d. **O**-type.
e. **A**-type.

ANS: D PTS: 2

INSTRUCTIONS: Select the correct answer for each multiple choice question.

8. Given the categorical proposition "All termites are unwelcome pests." If the quality but not the quantity is changed, the resulting proposition is:
a. No termites are unwelcome pests.
b. All termites are not welcome pests.
c. No termites are welcome pests.
d. All termites are not unwelcome pests.
e. Some termites are unwelcome pests.

ANS: A PTS: 2

9. Given the categorical proposition "Some clowns are unhappy people." If the quantity but not the quality is changed, the resulting proposition is:
a. Some clowns are not unhappy people.
b. All clowns are unhappy people.
c. Some clowns are happy people.
d. All clowns are happy people.
e. Some clowns are happy people.

ANS: B PTS: 2

10. Given the categorical proposition "Some actors are not shy performers." If both the quality and the quantity are changed, the resulting proposition is:
a. Some actors are shy performers.
b. No actors are shy performers.
c. All actors are shy performers.
d. All actors are not shy performers.
e. Some actors are not shy performers.

ANS: C PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and an operation/relation to be performed on that statement. You must identify the new statement and the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

11. All A are B. (T) Contrary

a. No A are non-B. (T)
b. All B are A. (Und.)
c. Some A are B. (T)
d. No A are B. (Und.)
e. No A are B. (F)

ANS: E PTS: 2

12. Some A are non-B. (F) Obversion
a. Some A are not non-B. (T)
b. Some A are not B. (F)
c. Some A are B. (F)
d. No A are B. (F)
e. Some B are non-A. (Und.)

ANS: B PTS: 2

13. All non-A are B. (F) Subalternation
a. All non-B are A. (F)
b. No non-A are B. (Und.)
c. Some non-A are B. (F)
d. Some non-A are not B. (T)
e. Some non-A are B. (Und.)

ANS: E PTS: 2

14. No non-A are B. (T) Conversion
a. No non-B are A. (Und.)
b. No A are non-B. (T)
c. No B are non-A. (T)
d. All non-A are non-B. (T)
e. All non-A are B. (F)

ANS: C PTS: 2

15. Some A are not non-B. (F) Contradiction
a. All A are non-B. (T)
b. Some A are non-B. (T)
c. Some B are not non-A. (F)
d. Some A are non-B. (T)
e. Some A are B. (T)

ANS: A PTS: 2

16. All non-A are B. (T) Contraposition
a. All A are non-B. (T)
b. All B are non-A. (Und.)
c. All non-B are A. (T)
d. All non-B are A. (Und.)
e. All A are non-B. (Und.)

ANS: C PTS: 2

17. Some non-A are not B. (T) Subcontrary
a. Some A are B. (T)
b. No non-A are B. (Und.)

c. All non-A are B. (F)
d. Some non-A are B. (Und.)
e. Some non-B are not A. (T)

ANS: D PTS: 2

INSTRUCTIONS: In each problem below you are given a statement, its truth value in parentheses, and a new statement. You must determine how the new statement is related to the given statement and determine the truth value of the new statement. Adopt the Aristotelian standpoint and assume that 'A' and 'B' denote things that actually exist.

18. Some A are not non-B. (T) Some A are B.
a. Conversion. (Und.)
b. Obversion. (T)
c. Contradiction. (F)
d. Contraposition. (T)
e. Subcontrary. (Und.)

ANS: B PTS: 2

19. Some A are B. (F) Some A are not B.
a. Subcontrary. (Und.)
b. Conversion. (F)
c. Contradiction. (T)
d. Conversion. (T)
e. Subcontrary. (T)

ANS: E PTS: 2

20. No non-A are non-B. (F) All non-A are non-B.
a. Contraposition. (Und.)
b. Obversion. (F)
c. Contradiction. (T)
d. Contrary. (Und.)
e. Subcontrary. (T)

ANS: D PTS: 2

21. Some non-A are non-B. (F) Some B are A.
a. Subcontrary. (T)
b. Conversion. (T)
c. Conversion. (F)
d. Contraposition. (Und.)
e. Contraposition. (F)

ANS: D PTS: 2

22. All non-A are B. (T) Some non-A are not B.
a. Subalternation. (T)
b. Contraposition. (T)
c. Contradiction. (F)
d. Conversion. (Und.)
e. Contrary. (Und.)

ANS: C PTS: 2

23. Some A are non-B. (T) Some non-B are A.
    a. Conversion. (T)
    b. Contrary. (F)
    c. Contraposition. (Und.)
    d. Subalternation. (Und.)
    e. Contradiction. (F)

    ANS: A PTS: 2

24. Some non-A are not B. (F) No non-A are B.
    a. Contradiction. (T)
    b. Subcontrary. (Und.)
    c. Subcontrary. (T)
    d. Subalternation. (Und.)
    e. Subalternation. (F)

    ANS: E PTS: 2

    INSTRUCTIONS: Select the answer that best characterizes each immediate inference. Adopt the Aristotelian standpoint for these problems.

25. No cruise ships are unsightly vessels. Therefore, no unsightly vessels are cruise ships.
    a. Invalid, illicit conversion.
    b. Valid, no fallacy.
    c. Invalid, illicit contrary.
    d. Invalid, illicit contraposition.
    e. Invalid, illicit subalternation.

    ANS: B PTS: 2

26. It is false that no snow storms are exhilarating events. Therefore, all snow storms are exhilarating events.
    a. Invalid, illicit contraposition.
    b. Invalid, existential fallacy.
    c. Invalid, illicit contrary.
    d. Invalid, illicit subcontrary.
    e. Invalid, illicit subalternation.

    ANS: C PTS: 2

27. All tooth fairies are silent visitors. Therefore, no tooth fairies are noisy visitors.
    a. Invalid, illicit subalternation.
    b. Valid, no fallacy.
    c. Invalid, existential fallacy.
    d. Invalid, illicit contrary.
    e. Invalid, illicit subcontrary.

    ANS: B PTS: 2

28. It is false that some sailboats are steamships. Therefore, some sailboats are not steamships.
    a. Valid, no fallacy.
    b. Invalid, illicit contrary.
    c. Invalid, illicit subalternation.
    d. Invalid, illicit conversion.
    e. Invalid, illicit subcontrary.

ANS: A PTS: 2

29. Some crystal vases are not China teapots. Therefore, some China teapots are not crystal vases.
    a. Valid, no fallacy.
    b. Invalid, illicit contrary.
    c. Invalid, illicit contraposition.
    d. Invalid, illicit conversion.
    e. Invalid, illicit subalternation.

    ANS: D PTS: 2

30. It is false that some three dollar bills are legitimate currencies. Therefore, some three dollar bills are not legitimate currencies.
    a. Invalid, illicit subalternation.
    b. Valid, no fallacy.
    c. Invalid, illicit subcontrary.
    d. Invalid, illicit contrary.
    e. Invalid, existential fallacy.

    ANS: E PTS: 2

31. All cable cars are romantic conveyances. Therefore, it is false that no cable cars are romantic conveyances.
    a. Invalid, illicit conversion.
    b. Invalid, illicit contrary.
    c. Valid, no fallacy.
    d. Invalid, illicit subcontrary.
    e. Invalid, existential fallacy.

    ANS: C PTS: 2

32. No sand castles are permanent structures. Therefore, some sand castles are not permanent structures.
    a. Invalid, illicit subcontrary.
    b. Invalid, illicit subalternation.
    c. Valid, no fallacy.
    d. Invalid, illicit contrary.
    e. Invalid, illicit conversion.

    ANS: C PTS: 2

33. Some weekend getaways are not relaxing vacations. Therefore, some weekend getaways are relaxing vacations.
    a. Invalid, illicit subalternation.
    b. Invalid, illicit subcontrary.
    c. Invalid, illicit contrary.
    d. Invalid, illicit contraposition.
    e. Valid, no fallacy.

    ANS: B PTS: 2

34. Some important writers are not unpopular figures. Therefore, some popular figures are not unimportant writers.
    a. Invalid, illicit subcontrary.
    b. Invalid, illicit conversion.
    c. Invalid, illicit contraposition.

d. Invalid, illicit obversion.
e. Valid, no fallacy.

ANS: E PTS: 2

35. Some term papers are not literary successes. Therefore, no term papers are literary successes.
a. Invalid, illicit contrary.
b. Invalid, illicit subalternation.
c. Valid, no fallacy
d. Invalid, illicit contraposition.
e. Invalid, existential fallacy.

ANS: B PTS: 2

36. It is false that all water sprites are charming nymphs. Therefore, some water sprites are not charming nymphs.
a. Invalid, illicit subalternation.
b. Invalid, illicit subcontrary.
c. Invalid, existential fallacy.
d. Valid, no fallacy.
e. Invalid, illicit contrary.

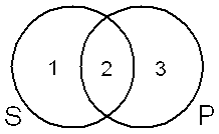
ANS: D PTS: 2

37. No expensive menu items are unappetizing meals. Therefore, no appetizing meals are inexpensive menu items.
a. Invalid, illicit contraposition.
b. Valid, no fallacy.
c. Invalid, illicit conversion.
d. Invalid, illicit obversion.
e. Invalid, illicit subalternation.

ANS: A PTS: 2

INSTRUCTIONS: Fill in the Venn diagram for each statement.

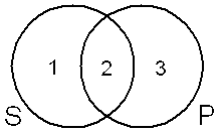
38. All S are P. (Aristotelian standpoint)



After filling in the Venn diagram,
a. Area 1 is shaded, and there is a circled X in Area 2.
b. Areas 1 and 3 are shaded.
c. There is an X in Area 2, and there are no other marks.
d. Area 3 is shaded, and there is a circled X in Area 2.
e. Area 2 is shaded, and there is a circled X in Area 1.

ANS: A PTS: 2

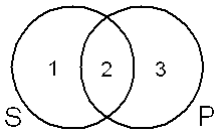
39. No S are P. (Boolean standpoint)



After filling in the Venn diagram,
a. There is an X in Area 2, and there are no other marks.
b. There is an X in Area 1 and an X in Area 3.
c. Area 2 is shaded, and there are no other marks.
d. Areas 1 and 3 are shaded.
e. Area 2 is shaded, and there is an X in Area 1.

ANS: C PTS: 2

40. Some S are not P. (Boolean standpoint)



After filling in the Venn diagram,
a. There is an X in Area 1 and in Area 2.
b. Area 1 is shaded, and there are no other marks.
c. Area 1 is shaded, and there is an X in Area 2.
d. Areas 1 and 3 are shaded.
e. There is an X in Area 1, and there are no other marks.

ANS: E PTS: 2

INSTRUCTIONS: Select the best translation for each categorical proposition.

41. There is a desk in the office.
a. Some desks are not things in the office.
b. Some desks are in the office.
c. All offices are things that contain a desk.
d. Some desks are things in the office.
e. Some desks are things in the office and some desks are not things in the office.

ANS: D PTS: 2

42. Memorial Day never occurs in June.
a. All times that are not June are times Memorial Day occurs.
b. No times Memorial Day occurs are times in June.
c. All times Memorial Day occurs are not times in June.
d. All times in June are not times Memorial Day occurs.
e. No Memorial Days are in June.

ANS: B PTS: 2

43. Wherever there is poverty there is crime.
a. All places there is poverty are places there is crime.
b. All places there is no poverty are places there is no crime.
c. All places there is crime are places there is poverty.
d. All times there is poverty are times there is crime.

e. Some places there is poverty are places there is crime.

ANS: A PTS: 2

44. She sings whenever she is happy.
    a. All times she sings are times she is happy.
    b. Some times she is happy are times she sings.
    c. All times she is happy are times she sings.
    d. All times she is not happy are times she does not sing.
    e. All times she is happy she sings.

    ANS: C PTS: 2

45. A spoiled brat is obnoxious.
    a. All obnoxious brats are spoiled.
    b. All obnoxious people are spoiled brats.
    c. All spoiled brats are obnoxious.
    d. All brats who are not spoiled are people who are not obnoxious.
    e. All spoiled brats are obnoxious people.

    ANS: E PTS: 2

46. Few capitalists are truly generous.
    a. All capitalists are people who are seldom generous.
    b. No capitalists are truly generous people.
    c. Some capitalists are truly generous people.
    d. Some capitalists are truly generous people, and some capitalists are not truly generous people.
    e. Some capitalists are not truly generous people.

    ANS: D PTS: 2

47. None but geniuses are attending.
    a. All geniuses are persons who are attending.
    b. All people who are not attending are people who are not geniuses.
    c. All persons attending are geniuses.
    d. Some geniuses are persons who are attending.
    e. No geniuses are people who are not attending.

    ANS: C PTS: 2

48. Pansies are flowers.
    a. Some pansies are not flowers.
    b. All pansies are flowers.
    c. Some pansies are flowers.
    d. All things that are not pansies are things that are not flowers.
    e. All things identical to pansies are things identical to flowers.

    ANS: B PTS: 2

49. All of the vehicles except the jeeps broke down.
    a. Some jeeps are vehicles that broke down and some jeeps are not vehicles that broke down.
    b. No jeeps are vehicles that broke down.
    c. No jeeps are vehicles that broke down, and all vehicles that are not jeeps are vehicles that broke down.
    d. All vehicles that are not jeeps are vehicles that broke down.

e. All vehicles that did not break down are jeeps.

ANS: C PTS: 2

50. Apples are not sweet unless they are ripe.
    a. No apples that are not sweet are ripe apples.
    b. All sweet apples are ripe apples.
    c. All ripe apples are sweet apples.
    d. All sweet apples are ripe apples, and all apples that are not ripe are apples that are not sweet.
    e. Some sweet apples are ripe apples.

ANS: B PTS: 2

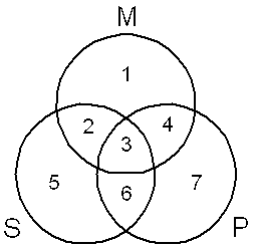
Chapter 5 Test A

MULTIPLE CHOICE

Syllogistic Form 1A
Given the following syllogistic form:

Some M are not P.
No S are M.
Some S are not P.

1. For Syllogistic Form 1A, after filling in the Venn diagram,



   a. Areas 2 and 3 are shaded, and there is an X on the line between areas 1 and 4.
   b. Areas 5 and 6 are shaded, and there is an X on the line between areas 1 and 2.
   c. Areas 2 and 3 are shaded, and there is an X in area 1.
   d. Areas 1 and 2 are shaded, and there is an X in area 3.
   e. Areas 2 and 3 are shaded, and there is an X on the line between areas 6 and 7.

   ANS: C PTS: 2

2. For Syllogistic Form 1A, the mood and figure is:
   a. **EAE**-4
   b. **IEI**-1
   c. **OEO**-3
   d. **OAO**-2
   e. **OEO**-1

   ANS: E PTS: 2

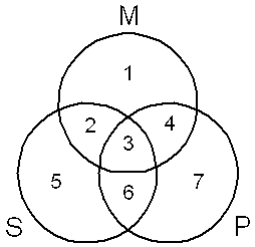
3. For Syllogistic Form 1A, the answer from the Boolean standpoint is:
   a. Invalid, exclusive premises.
   b. Invalid, illicit major.
   c. Invalid, undistributed middle.
   d. Valid, no fallacy.
   e. Invalid, drawing an affirmative conclusion from negative premises.

   ANS: A PTS: 2

Syllogistic Form 2A
Given the following syllogistic form:

All M are P.
All M are S.
Some S are P.

4. For Syllogistic Form 2A, after filling in the Venn diagram,



   a. There is an X on the line between areas 2 and 3 and between areas 3 and 4.
   b. Areas 1, 2, and 4 are shaded.
   c. Areas 2, 3, and 4 are shaded.
   d. Areas 5, 6, and 7 are shaded.
   e. Areas 1, 2, 5, and 6 are shaded.

   ANS: B PTS: 2

5. For Syllogistic Form 2A, the mood and figure is:
   a. **EEO**-3
   b. **EEI**-2
   c. **AAO**-2
   d. **AAI**-3
   e. **AAI**-2

   ANS: D PTS: 2

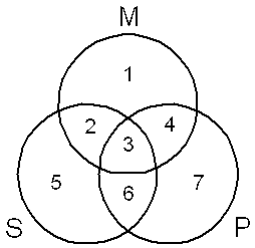
6. For Syllogistic Form 2A, the answer from the Boolean standpoint is:
   a. Invalid, existential fallacy.
   b. Invalid, exclusive premises.
   c. Invalid, illicit minor.
   d. Invalid, illicit major.
   e. Valid, no fallacy.

   ANS: A PTS: 2

   Syllogistic Form 3A
   Given the following syllogistic form:

   No P are M.
   <u>All M are S.</u>
   No S are P.

7. For Syllogistic Form 3A, after filling in the Venn diagram,



a. Areas 1, 4, 6 and 7 are shaded.
b. Areas 2, 3, 6, and 7 are shaded.
c. Areas 1, 3, and 4 are shaded.
d. Areas 3 and 4 are shaded, and there is an X in area 2.
e. Areas 1, 2, 6, and 7 are shaded.

ANS: C PTS: 2

8. For Syllogistic Form 3A, the mood and figure is:
a. **EIE**-2
b. **AIA**-4
c. **IAI**-4
d. **AEA**-1
e. **EAE**-4

ANS: E PTS: 2

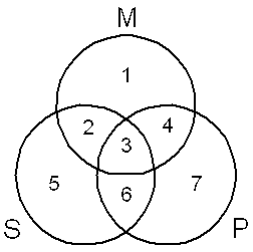
9. For Syllogistic Form 3A, the answer from the Boolean standpoint is:
a. Invalid, existential fallacy.
b. Invalid, exclusive premises.
c. Valid, no fallacy.
d. Invalid, illicit minor.
e. Invalid, drawing a negative conclusion from an affirmative premise.

ANS: D PTS: 2

Syllogistic Form 4A
Given the following syllogistic form:

Some P are M.
<u>Some S are M.</u>
Some S are P.

10. For Syllogistic Form 4A, after filling in the Venn diagram,



a. There is an X on the line between areas 1 and 2 and between areas 1 and 4.
b. There is an X on the line between areas 2 and 3 and between areas 3 and 4.
c. There is an X on the line between areas 2 and 5 and between areas 4 and 7.
d. There is an X in area 2 and in area 4.
e. Areas 2, 3, and 4 are shaded.

ANS: B PTS: 2

11. For Syllogistic Form 4A, the mood and figure is:
a. **OOO**-2
b. **OOO**-3
c. **AAA**-2

d. **EEE**-2
e. **III**-2

ANS: E PTS: 2

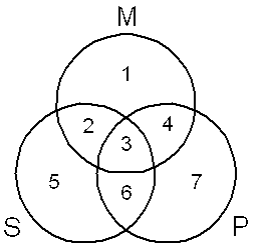
12. For Syllogistic Form 4A, the answer from the Boolean standpoint is:
a. Invalid, undistributed middle.
b. Invalid, illicit major.
c. Invalid, exclusive premises.
d. Valid, no fallacy.
e. Invalid, existential fallacy.

ANS: A PTS: 2

Syllogistic Form 5A
Given the following syllogistic form:

All M are P.
Some M are S.
Some S are not P.

13. For Syllogistic Form 5A, after filling in the Venn diagram,



a. Areas 6 and 7 are shaded, and there is an X on the line between areas 2 and 3.
b. Areas 3 and 4 are shaded, and there is an X in area 2.
c. Areas 1 and 2 are shaded, and there is an X on the line between areas 3 and 4.
d. Areas 1 and 2 are shaded, and there is an X in area 3.
e. Areas 1 and 4 are shaded, and there is an X on the line between areas 3 and 4.

ANS: D PTS: 2

14. For Syllogistic Form 5A, the mood and figure is:
a. **IAO**-1
b. **EIO**-1
c. **AIO**-3
d. **AIO**-2
e. **AOI**-3

ANS: C PTS: 2

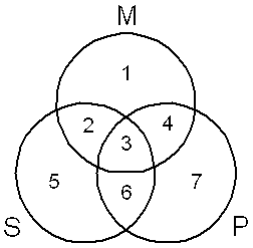
15. For Syllogistic Form 5A, the answer from the Boolean standpoint is:
a. Invalid, illicit major.
b. Invalid, drawing an affirmative conclusion from a negative premise.
c. Valid, no fallacy.
d. Invalid, existential fallacy.
e. Invalid, undistributed middle.

ANS: A PTS: 2

Syllogistic Form 6A
Given the following syllogistic form:

No P are M.
Some S are M.
Some S are not P.

16. For Syllogistic Form 6A, after filling in the Venn diagram,



a. Areas 3 and 4 are shaded, and there is an X in area 5.
b. Areas 3 and 4 are shaded, and there is an X in area 2.
c. Areas 3, 4, 5, and 6 are shaded.
d. Areas 5 and 6 are shaded, and there is an X on the line between areas 3 and 4.
e. Areas 6 and 7 are shaded, and there is an X on the line between areas 2 and 3.

ANS: B PTS: 2

17. For Syllogistic Form 6A, the mood and figure is:
a. **IEO**-2
b. **EAO**-1
c. **EIO**-3
d. **AIO**-1
e. **EIO**-2

ANS: E PTS: 2

18. For Syllogistic Form 6A, the answer from the Boolean standpoint is:
a. Invalid, existential fallacy.
b. Invalid, illicit minor.
c. Invalid, drawing a negative conclusion from a negative premise.
d. Valid, no fallacy.
e. Invalid, undistributed middle.

ANS: D PTS: 2

19. Given the following syllogism:

All animals are pigs.
No mammals are pigs.
Some mammals are not animals.

This syllogism:
a. Commits the existential fallacy from the Aristotelian standpoint only.
b. Is valid from the Aristotelian standpoint.

c. Is invalid from both the Boolean and the Aristotelian standpoints.
d. Is valid from the Boolean standpoint.
e. Commits the existential fallacy from both standpoints.

ANS: B PTS: 2

20. Given the following syllogism:

No satyrs are goats.
All satyrs are animals.
Some animals are not goats.

This syllogism:
a. Is invalid from only the Boolean standpoint.
b. Is invalid from only the Aristotelian standpoint.
c. Is invalid from both standpoints.
d. Is valid from both standpoints.
e. Commits the existential fallacy from only the Boolean standpoint.

ANS: C PTS: 2

Syllogism 1A
Given the following syllogism:
No untalented bards are compelling writers, so some uncompelling writers are not uninspired poets, for some inspired poets are talented bards.

21. After reducing the number of terms in Syllogism 1A, the conclusion is:
a. Some inspired poets are not compelling writers.
b. All talented bards are compelling writers.
c. Some compelling writers are not inspired poets.
d. All compelling writers are talented bards.
e. Some inspired poets are talented bards.

ANS: A PTS: 2

22. For Syllogism 1A, the major premise is:
a. All talented bards are compelling writers.
b. Some talented bards are not inspired poets.
c. No compelling writers are untalented bards.
d. Some inspired poets are talented bards.
e. All compelling writers are talented bards.

ANS: E PTS: 2

23. For Syllogism 1A, the minor premise is:
a. All compelling writers are talented bards.
b. Some inspired poets are talented bards.
c. Some inspired poets are not compelling writers.
d. Some compelling writers are not inspired poets.
e. Some inspired poets are not talented bards.

ANS: B PTS: 2

Syllogism 2A
Given the following syllogism:

Some uncontaminated salads are healthy meals, for some appetizing foods are contaminated salads, and all unhealthy meals are unappetizing foods.

24. After reducing the number of terms in Syllogism 2A, the conclusion is:
    a. Some healthy meals are not contaminated salads.
    b. Some appetizing foods are not contaminated salads.
    c. All appetizing foods are healthy meals.
    d. Some contaminated salads are healthy meals.
    e. Some appetizing foods are contaminated salads.

    ANS: A PTS: 2

25. For Syllogism 2A, the major premise is:
    a. No unhealthy meals are appetizing foods.
    b. Some appetizing foods are not contaminated salads.
    c. Some appetizing foods are contaminated salads.
    d. All appetizing foods are healthy meals.
    e. Some healthy meals are not contaminated salads.

    ANS: C PTS: 2

26. For Syllogism 2A, the minor premise is:
    a. Some appetizing foods are contaminated salads.
    b. Some healthy meals are contaminated salads.
    c. Some healthy meals are not contaminated salads.
    d. All appetizing foods are healthy meals.
    e. No unhealthy meals are appetizing foods.

    ANS: D PTS: 2

Syllogism 3A
Given the following syllogism:
Jack can't be a mechanic because every mechanic owns tools, and Jack does not own any tools.

27. After translating Syllogism 3A into standard form, the conclusion is:
    a. All people identical to Jack are not mechanics.
    b. No people identical to Jack are mechanics.
    c. All mechanics are people who own tools.
    d. No people identical to Jack are people who own tools.
    e. All people identical to Jack are not people who own tools.

    ANS: B PTS: 2

28. For Syllogism 3A, the major premise is:
    a. No people who own tools are people identical to Jack.
    b. No people identical to Jack are mechanics.
    c. All people identical to Jack are not people who own tools.
    d. All people who own tools are mechanics.
    e. All mechanics are people who own tools.

    ANS: E PTS: 2

29. For Syllogism 3A, the minor premise is:
    a. All mechanics are people who own tools.
    b. No people who own tools are not mechanics.

c. All people who own tools are mechanics.
d. No people identical to Jack are people who own tools.
e. No people identical to Jack are mechanics.

ANS: D PTS: 2

Syllogism 4A
Given the following syllogism:
Movies are not sexy unless they have nude scenes, so *Dark Interlude* is sexy because it has nude scenes.

30. After translating Syllogism 4A into standard form, the conclusion is:
a. All movies identical to *Dark Interlude* are sexy.
b. All movies that are not sexy are movies without nude scenes.
c. All movies identical to *Dark Interlude* are sexy movies.
d. All sexy movies are movies with nude scenes.
e. All movies identical to *Dark Interlude* are movies with nude scenes.

ANS: C PTS: 2

31. For Syllogism 4A, the major premise is:
a. All sexy movies are movies with nude scenes.
b. All movies identical to *Dark Interlude* are movies with nude scenes.
c. All movies with nude scenes are sexy movies.
d. Some sexy movies are movies without nude scenes.
e. All movies identical to *Dark Interlude* are sexy movies.

ANS: A PTS: 2

32. For Syllogism 4A, the minor premise is:
a. No movies without nude scenes are movies not identical to *Dark Interlude*.
b. All movies with nude scenes are sexy movies.
c. All sexy movies are movies with nude scenes.
d. All movies identical to *Dark Interlude* are sexy movies.
e. All movies identical to *Dark Interlude* are movies with nude scenes.

ANS: E PTS: 2

33. Given the following enthymeme:
Frank always feels terrible when he has a cold, so Frank must feel terrible now.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Anyone feels terrible who has a cold. (Conclusion)
b. Whoever has a cold is not healthy. (Premise)
c. Whenever Frank feels terrible he has a cold. (Premise)
d. Frank has a cold now. (Premise)
e. Whoever is not healthy feels terrible. (Conclusion)

ANS: D PTS: 2

34. Given the following enthymeme:
Religions are dangerous if they lead to violence, and fundamentalist religions lead to violence.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Fundamentalist religions are dangerous. (Conclusion)

b. Fundamentalist religion has led some followers to commit murder. (Conclusion)
c. Some things that lead to violence are fundamentalist religions. (Premise)
d. Pat Robertson is a fundamentalist Christian. (Premise)
e. All non-fundamentalist religions are things that are not dangerous. (Conclusion)

ANS: A PTS: 2

35. Given the following enthymeme:
The Louvre is in France because it's in Paris.

The statement needed to convert the enthymeme into a valid syllogism is:
a. The most important museums of France are in Paris. (Conclusion)
b. Whatever is in Paris is in France. (Premise)
c. The Louvre is one of the greatest art museums. (Premise)
d. The Louvre was never located anywhere except Paris. (Premise)
e. Paris is the most important city in France. (Conclusion)

ANS: B PTS: 2

Sorites 1A
Given the following sorites:

Some N are F.
All K are R.
All T are K.
No F are R.
Some N are not T.

36. For Sorites 1A, the correct standard form is:
a. Some N are not T.
All T are K.
All K are R.
No F are R.
Some N are F.
b. All K are R.
No F are R.
Some N are F.
All T are K.
Some N are not T.
c. All T are K.
All K are R.
No F are R.
Some N are F.
Some N are not T.
d. No T are K.
Some K are R.
All F are R.
Some N are not F.
Some N are T.
e. No F are R.
All K are R.
All T are K.
Some N are F.
Some N are not T.

ANS: C PTS: 2

37. For Sorites 1A, the first intermediate conclusion is:
    a. Some N are not K.
    b. All T are R.
    c. No K are F.
    d. No T are F.
    e. Some N are not R.

    ANS: B PTS: 2

38. For Sorites 1A, the second intermediate conclusion is:
    a. No K are F.
    b. Some N are not R.
    c. Some F are not K.
    d. All T are R.
    e. No T are F.

    ANS: E PTS: 2

39. For Sorites 1A, the correct answer is:
    a. Uncogent.
    b. Invalid.
    c. Cogent.
    d. Valid.
    e. Strong.

    ANS: D PTS: 2

40. Given the following sorites:

    All T are D.
    No D are R.
    All A are R.
    Some K are A.
    Some K are not T.

    This sorites is:
    a. Valid because no rules are broken.
    b. Invalid because the subject term of the conclusion is not distributed.
    c. Invalid because it has more than two universal premises.
    d. Invalid because one of the middle terms is not distributed.
    e. Invalid because it draws a negative conclusion from three affirmative premises.

    ANS: A PTS: 2

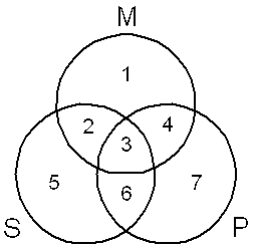
Chapter 5 Test B

MULTIPLE CHOICE

Syllogistic Form 1B
Given the following syllogistic form:

Some P are M.
No M are S.
Some S are P.

1. For Syllogistic Form 1B, after filling in the Venn diagram,



   a. Areas 2 and 3 are shaded, and there is an X on the line between areas 1 and 4.
   b. Areas 2 and 3 are shaded, and there is an X in area 4.
   c. Areas 3 and 4 are shaded, and there is an X in area 2.
   d. Areas 1 and 4 are shaded, and there is an X in area 3.
   e. Areas 2 and 3 are shaded, and there is an X on the line between areas 4 and 7.

   ANS: B PTS: 2

2. For Syllogistic Form 1B, the correct mood and figure is:
   a. **IEI**-3
   b. **EIE**-4
   c. **IEI**-1
   d. **EIE**-1
   e. **IEI**-4

   ANS: E PTS: 2

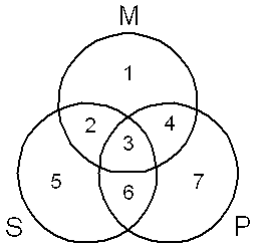
3. For Syllogistic Form 1B, the answer from the Boolean standpoint is:
   a. Invalid, drawing an affirmative conclusion from a negative premise.
   b. Invalid, illicit major.
   c. Invalid, existential fallacy.
   d. Invalid, undistributed middle.
   e. Valid, no fallacy.

   ANS: A PTS: 2

Syllogistic Form 2B
Given the following syllogistic form:

No M are P.
All M are S.
Some S are not P.

4. For Syllogistic Form 2B, after filling in the Venn diagram,



   a. Areas 2, 3, and 4 are shaded, and there is an X in area 1.
   b. Areas 2, 3, 6, and 7 are shaded, and there is an X in area 5.
   c. Areas 1 and 4 are shaded, and there is an X in area 5.
   d. Areas 1, 3, and 4 are shaded.
   e. Areas 1, 3, and 4 are shaded, and there is an X on the line between areas 2 and 5.

   ANS: D PTS: 2

5. For Syllogistic Form 2B, the correct mood and figure is:
   a. **EAO**-1
   b. **EAO**-2
   c. **EAO**-3
   d. **AEO**-2
   e. **OAE**-4

   ANS: C PTS: 2

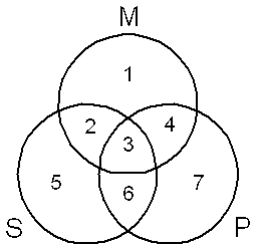
6. For Syllogistic Form 2B, the answer from the Boolean standpoint is:
   a. Invalid, existential fallacy.
   b. Invalid, drawing a negative conclusion from affirmative premises.
   c. Valid, no fallacy.
   d. Invalid, illicit minor.
   e. Invalid, exclusive premises.

   ANS: A PTS: 2

   Syllogistic Form 3B
   Given the following syllogistic form:

   No M are P.
   <u>Some S are not M.</u>
   Some S are not P.

7. For Syllogistic Form 3B, after filling in the Venn diagram,



a. Areas 3 and 4 are shaded, and there is an X on the line between areas 6 and 7.
b. Areas 2 and 3 are shaded, and there is an X in area 6.
c. Areas 3 and 4 are shaded, and there is an X on the line between areas 2 and 5.
d. Areas 3 and 4 are shaded, and there is an X in area 6.
e. Areas 3 and 4 are shaded, and there is an X on the line between areas 5 and 6.

ANS: E PTS: 2

8. For Syllogistic Form 3B, the correct mood and figure is:
a. **EII**-1
b. **OOE**-4
c. **EOO**-4
d. **EOO**-1
e. **AOO**-1

ANS: D PTS: 2

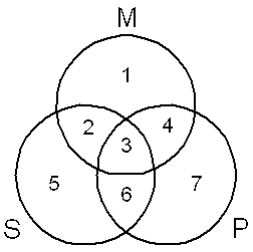
9. For Syllogistic Form 3B, the answer from the Boolean standpoint is:
a. Invalid, existential fallacy.
b. Invalid, exclusive premises.
c. Invalid, undistributed middle.
d. Valid, no fallacy.
e. Invalid, illicit minor.

ANS: B PTS: 2

Syllogistic Form 4B
Given the following syllogistic form:

All M are P.
Some S are M.
Some S are not P.

10. For Syllogistic Form 4B, after filling in the Venn diagram,



a. Areas 1 and 2 are shaded, and there is an X on the line between areas 3 and 6.
b. Areas 1 and 4 are shaded, and there is an X in area 3.
c. Areas 1 and 2 are shaded, and there is an X in area 3.
d. Areas 1 and 2 are shaded, and there is an X on the line between areas 3 and 4.
e. Area 1 is shaded, and there is an X on the line between areas 2 and 3.

ANS: C PTS: 2

11. For Syllogistic Form 4B, the correct mood and figure is:
a. **AIO**-4
b. **EIO**-1
c. **OIA**-4

d. **IAO**-3
e. **AIO**-1

ANS: E PTS: 2

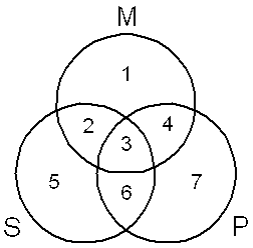
12. For Syllogistic Form 4B, the answer from the Boolean standpoint is:
    a. Invalid, drawing an affirmative conclusion from a negative premise.
    b. Invalid, exclusive premises.
    c. Valid, no fallacy.
    d. Invalid, illicit major.
    e. Invalid, undistributed middle.

ANS: D PTS: 2

Syllogistic Form 5B
Given the following syllogistic form:

Some P are M.
All S are M.
Some S are P.

13. For Syllogistic Form 5B, after filling in the Venn diagram,



    a. Areas 5 and 6 are shaded, there is an X on the line between areas 3 and 4.
    b. Areas 5 and 6 are shaded, and there is an X in area 4.
    c. Areas 6 and 7 are shaded, and there is an X in area 3.
    d. Areas 5 and 6 are shaded, and there is an X on the line between areas 2 and 3.
    e. Areas 2 and 5 are shaded, and there is an X on the line between areas 3 and 4.

ANS: A PTS: 2

14. For Syllogistic Form 5B, the correct mood and figure is:
    a. **AEA**-4
    b. **IAI**-3
    c. **IAI**-2
    d. **EIE**-2
    e. **IEI**-2

ANS: C PTS: 2

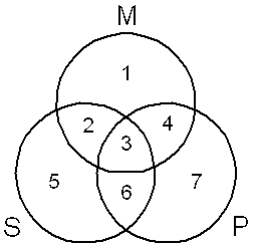
15. For Syllogistic Form 5B, the answer from the Boolean standpoint is:
    a. Invalid, undistributed middle.
    b. Invalid, illicit major.
    c. Invalid, existential fallacy.
    d. Valid, no fallacy.
    e. Invalid, illicit minor.

ANS: A PTS: 2

Syllogistic Form 6B
Given the following syllogistic form:

No P are M.
All S are M.
No S are P.

16. For Syllogistic Form 6B, after filling in the Venn diagram,



a. Areas 5 and 6 are shaded, and there is an X on the line between areas 3 and 4.
b. Areas 3, 4, 5, and 6 are shaded.
c. Areas 3, 4, and 5 only are shaded.
d. Areas 4, 5, and 6 only are shaded.
e. Areas 6 and 7 are shaded, and there is an X in area 5.

ANS: B PTS: 2

17. For Syllogistic Form 6B, the correct mood and figure is:
a. **AAA**-1
b. **EAE**-3
c. **IAI**-3
d. **EAE**-2
e. **AEA**-2

ANS: D PTS: 2

18. For Syllogistic Form 6B, the answer from the Boolean standpoint is:
a. Invalid, existential fallacy.
b. Invalid, drawing a negative conclusion from affirmative premises.
c. Invalid, exclusive premises.
d. Invalid, illicit major.
e. Valid, no fallacy.

ANS: E PTS: 2

19. Given the following syllogism:

All horses are mammals.
No spiders are mammals.
Some spiders are not horses.

This syllogism is:
a. Valid from the Boolean standpoint.
b. Invalid from the Aristotelian standpoint.

c. Valid from the Aristotelian standpoint because spiders exist.
d. Valid from the Aristotelian standpoint because horses exist.
e. Valid from the Aristotelian standpoint because mammals exist.

ANS: C PTS: 2

Syllogism 1B
Given the following syllogism:
Some harmful remarks are not respectful comments, since some appropriate assertions are harmless remarks, and all disrespectful comments are inappropriate assertions.

20. After reducing the number of terms in Syllogism 1B, the conclusion is:
a. Some appropriate assertions are harmful remarks.
b. Some harmful remarks are not respectful comments.
c. All respectful comments are appropriate assertions.
d. All appropriate assertions are respectful comments.
e. Some appropriate assertions are not harmful remarks.

ANS: B PTS: 2

21. For Syllogism 1B, the major premise is:
a. All appropriate assertions are respectful comments.
b. Some harmful remarks are not respectful comments.
c. Some appropriate assertions are not harmful remarks.
d. No respectful comments are appropriate assertions.
e. All respectful comments are appropriate assertions.

ANS: A PTS: 2

22. For Syllogism 1B, the minor premise is:
a. Some harmful remarks are appropriate assertions.
b. All respectful comments are appropriate assertions.
c. All appropriate assertions are respectful comments.
d. Some harmful remarks are not respectful comments.
e. Some appropriate assertions are not harmful remarks.

ANS: E PTS: 2

Syllogism 2B
Given the following syllogism:
Some unbelievable yarns are fictitious tales, so some false stories are not nonfictitious tales, since all true stories are believable yarns.

23. After reducing the number of terms in Syllogism 2B, the conclusion is:
a. All true stories are believable yarns.
b. Some believable yarns are fictitious tales.
c. Some fictitious tales are not true stories.
d. Some fictitious tales are believable yarns.
e. Some true stories are fictitious tales.

ANS: C PTS: 2

24. For Syllogism 2B, the major premise is:
a. All believable yarns are true stories.
b. Some true stories are fictitious tales.

c. Some fictitious tales are not true stories.
d. All true stories are believable yarns.
e. Some fictitious tales are believable yarns.

ANS: D PTS: 2

25. For Syllogism 2B, the minor premise is:
a. All true stories are believable yarns.
b. Some fictitious tales are not believable yarns.
c. Some fictitious tales are not true stories.
d. No true stories are believable yarns.
e. Some believable yarns are fictitious tales.

ANS: B PTS: 2

Syllogism 3B
Given the following syllogism:
Fred eats whatever he wants, so Fred eats bananas, because Fred wants to eat bananas.

26. After translating Syllogism 3B into standard form, the conclusion is:
a. Some things Fred eats are bananas.
b. All things Fred eats are things Fred wants to eat.
c. All things Fred eats are bananas.
d. Fred wants to eat bananas.
e. All bananas are things Fred wants to eat.

ANS: A PTS: 2

27. For Syllogism 3B, the major premise is:
a. All things Fred wants to eat are bananas.
b. All things Fred eats are things Fred wants to eat.
c. Some things Fred wants to eat are bananas.
d. Some things Fred wants to eat are things Fred eats.
e. All things Fred wants to eat are things Fred eats.

ANS: C PTS: 2

28. For Syllogism 3B, the minor premise is:
a. All things Fred eats are things Fred wants to eat.
b. All things Fred wants to eat are things Fred eats.
c. All bananas are things Fred wants to eat.
d. Some things Fred wants to eat are bananas.
e. All things Fred eats are bananas.

ANS: B PTS: 2

Syllogism 4B
Given the following syllogism:
Jane is not a citizen, because only citizens are property owners, and Jane is not a property owner.

29. After translating Syllogism 4B into standard form, the conclusion is:
a. Jane is not a citizen.
b. Some citizens are property owners.
c. All citizens are property owners.
d. All property owners are citizens.

e. No people identical to Jane are citizens.

ANS: E PTS: 2

30. For Syllogism 4B, the major premise is:
a. All citizens are property owners.
b. No people identical to Jane are citizens.
c. No people identical to Jane are property owners.
d. All property owners are citizens.
e. All people identical to Jane are property owners.

ANS: D PTS: 2

31. For Syllogism 4B, the minor premise is:
a. All citizens are property owners.
b. No people identical to Jane are property owners.
c. Some property owners are citizens.
d. All property owners are citizens.
e. Jane is not a property owner.

ANS: B PTS: 2

32. Given the following enthymeme:
Bob must be a good student. After all, he has a scholarship.

The statement needed to convert the enthymeme into a valid syllogism is:
a. All good students have scholarships. (Premise)
b. Bob's parents are very pleased. (Conclusion)
c. Everyone with a scholarship is a good student. (Premise)
d. Poor students never get scholarships. (Conclusion)
e. Bob needs good grades to keep his scholarship. (Premise)

ANS: C PTS: 2

33. Given the following enthymeme:
Nordstrom sells only expensive shoes, and Cindy buys all her shoes at Nordstrom.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Cindy's shoes are expensive. (Conclusion)
b. Cindy is rich. (Premise)
c. Cindy works for Nordstrom. (Premise)
d. Nordstrom earns a huge profit from selling shoes. (Conclusion)
e. Cindy likes expensive shoes. (Premise)

ANS: A PTS: 2

34. Given the following enthymeme:
Wherever there's smoke there's fire, and there's smoke in the attic.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Someone should call the fire department. (Conclusion)
b. All places there is fire are places identical to the attic. (Conclusion)
c. Fire always produces at least some smoke. (Premise)
d. There's fire in the attic. (Conclusion)
e. Smoke can cause a good deal of damage. (Premise)

ANS: D PTS: 2

35. Given the following enthymeme:
Kathy reads only short novels, so she must not read Tolstoy.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Kathy is not a good reader. (Conclusion)
b. Short novels are easy to read. (Premise)
c. All of Tolstoy's novels are long. (Conclusion)
d. Kathy hates Tolstoy. (Premise)
e. Tolstoy's novels are not short. (Premise)

ANS: E PTS: 2

Sorites 1B
Given the following sorites:

All N are G.
No S are F.
Some K are N.
All G are S.
Some K are not F.

36. For Sorites 1B, the correct standard form is:
a. Some K are N
All N are G.
No S are F.
All G are S.
Some K are not F.
b. All G are S.
All N are G.
No S are F.
Some K are N.
Some K are not F.
c. No S are F.
All G are S.
All N are G.
Some K are N.
Some K are not F.
d. All G are S.
No S are F.
Some K are not F.
Some K are N.
All N are G.
e. No S are F.
All N are G.
All G are S.
Some K are N.
Some K are not F.

ANS: C PTS: 2

37. For Sorites 1B, the first intermediate conclusion is:
a. Some G are K.

b. No G are F.
c. Some N are not F.
d. All G are F.
e. All N are S.

ANS: B PTS: 2

38. For Sorites 1B, the second intermediate conclusion is:
a. No F are N.
b. Some N are not K.
c. All N are F.
d. Some K are G.
e. No G are F.

ANS: A PTS: 2

39. For Sorites 1B, the correct answer is:
a. Consistent.
b. Invalid.
c. Sound.
d. Cogent.
e. Valid.

ANS: E PTS: 2

40. Given the following sorites:

All R are N.
No N are A.
All A are H.
Some E are H.
Some E are not R.

This sorites is:
a. Invalid because it has more than two affirmative premises.
b. Invalid because a term is distributed in the premises but not in the conclusion.
c. Valid because it breaks no rules.
d. Invalid because one of the middle terms is not distributed.
e. Invalid because it draws a particular conclusion from three universal premises.

ANS: D PTS: 2

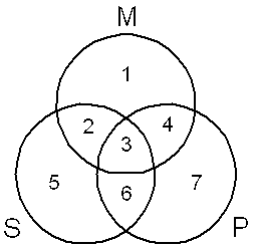
Chapter 5 Test C

MULTIPLE CHOICE

Syllogistic Form 1C
Given the following syllogistic form:

Some M are not P.
All M are S.
Some S are not P.

1. For Syllogistic Form 1C, after filling in the Venn diagram,



   a. Areas 1, 2, and 4 are shaded, and there is an X in area 3.
   b. Areas 5 and 6 are shaded, and there is an X on the line between areas 2 and 3.
   c. Areas 1 and 4 are shaded, and there is an X in area 3.
   d. Areas 1 and 4 are shaded, and there is an X in area 2.
   e. Areas 6 and 7 are shaded, and there is an X on the line between areas 2 and 3.

   ANS: D PTS: 2

2. For Syllogistic Form 1C, the mood and figure is:
   a. **EAE**-2
   b. **OAO**-4
   c. **OAO**-3
   d. **IAI**-3
   e. **OEO**-4

   ANS: C PTS: 2

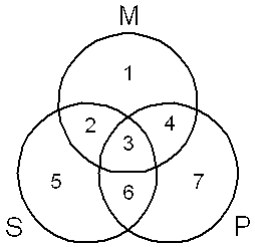
3. For Syllogistic Form 1C, the answer from the Boolean standpoint is:
   a. Invalid, existential fallacy.
   b. Invalid, drawing a negative conclusion from a negative premise.
   c. Invalid, exclusive premises.
   d. Invalid, illicit major.
   e. Valid, no fallacy.

   ANS: E PTS: 2

Syllogistic Form 2C
Given the following syllogistic form:

Some P are not M.
Some M are S.
Some S are not P.

4. For Syllogistic Form 2C, after filling in the Venn diagram,



   a. There is an X on the line between areas 2 and 5 and between areas 1 and 4.
   b. There is an X on the line between areas 2 and 3 and between areas 6 and 7.
   c. There is an X in areas 2 and in area 7.
   d. There is an X on the line between areas 1 and 2 and between areas 5 and 6.
   e. There is an X on the line between areas 3 and 4 and in area 3.

   ANS: B PTS: 2

5. For Syllogistic Form 2C, the mood and figure is:
   a. **EAE**-3
   b. **IOI**-4
   c. **OIO**-4
   d. **OAO**-1
   e. **AIA**-4

   ANS: C PTS: 2

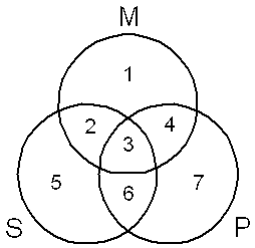
6. For Syllogistic Form 2C, the answer from the Boolean standpoint is:
   a. Invalid, illicit major.
   b. Invalid, drawing a negative conclusion from an affirmative premise.
   c. Invalid, illicit minor.
   d. Invalid, exclusive premises.
   e. Invalid, undistributed middle.

   ANS: A PTS: 2

   Syllogistic Form 3C
   Given the following syllogistic form:

   All M are P.
   <u>No S are M.</u>
   All S are P.

7. For Syllogistic Form 3C, after filling in the Venn diagram,



a. Areas 2 and 3 are shaded, and there is an X in area 4.
b. Areas 1, 2, 5, and 6 are shaded.
c. Areas 3, 4, 5, and 6 are shaded.
d. Areas 5 and 6 are shaded, and there is an X on the line between areas 3 and 4.
e. Areas 1, 2, and 3 are shaded.

ANS: E PTS: 2

8. For Syllogistic Form 3C, the mood and figure is:
a. **EAE**-4
b. **EAE**-1
c. **AIA**-1
d. **AEA**-1
e. **EIE**-4

ANS: D PTS: 2

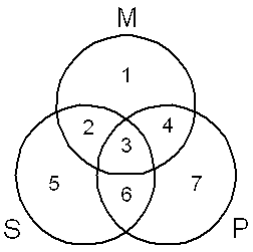
9. For Syllogistic Form 3C, the answer from the Boolean standpoint is:
a. Invalid, illicit minor.
b. Invalid, drawing an affirmative conclusion from a negative premise.
c. Invalid, existential fallacy.
d. Invalid, exclusive premises.
e. Invalid, drawing a negative conclusion from affirmative premises.

ANS: B PTS: 2

Syllogistic Form 4C
Given the following syllogistic form:

All P are M.
All S are M.
All S are P.

10. For Syllogistic Form 4C, after filling in the Venn diagram,



a. Areas 1, 5, and 7 are shaded.
b. Areas 2, 3, and 4 are shaded.
c. Areas 5, 6, and 7 are shaded.
d. There is an X on the line between areas 2 and 3 and between areas 3 and 4.
e. All areas except area 3 are shaded.

ANS: C PTS: 2

11. For Syllogistic Form 4C, the mood and figure is:
a. **EEE**-3
b. **OOO**-2
c. **III**-4

d. **AAA**-2
e. **AAA**-3

ANS: D PTS: 2

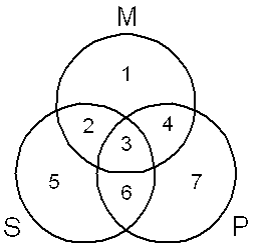
12. For Syllogistic Form 4C, the answer from the Boolean standpoint is:
    a. Invalid, undistributed middle.
    b. Invalid, illicit minor.
    c. Invalid, exclusive premises.
    d. Valid, no fallacy.
    e. Invalid, drawing an affirmative conclusion from universal premises.

ANS: A PTS: 2

Syllogistic Form 5C
Given the following syllogistic form:

No P are M.
All S are M.
Some S are not P.

13. For Syllogistic Form 5C, after filling in the Venn diagram,



    a. Areas 5, 6, and 7 are shaded.
    b. Areas 1, 2, 5, and 6 are shaded.
    c. Areas 3, 4, 5, and 6 are shaded.
    d. Areas 3 and 4 are shaded, and there is an X in area 2.
    e. Areas 2, 3, and 4 are shaded.

ANS: C PTS: 2

14. For Syllogistic Form 5C, the mood and figure is:
    a. **EAI**-3
    b. **EAO**-2
    c. **IAO**-2
    d. **AEO**-3
    e. **AEO**-2

ANS: B PTS: 2

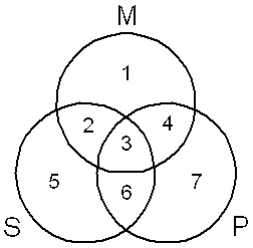
15. For Syllogistic Form 5C, the answer from the Boolean standpoint is:
    a. Invalid, drawing a negative conclusion from a negative premise.
    b. Valid, no fallacy.
    c. Invalid, illicit major.
    d. Invalid, exclusive premises.
    e. Invalid, existential fallacy.

ANS: E PTS: 2

Syllogistic Form 6C
Given the following syllogistic form:

No M are P.
Some M are not S.
Some S are not P.

16. For Syllogistic Form 6C, after filling in the Venn diagram,



a. Areas 1 and 2 are shaded and there is an X in area 4.
b. Areas 3 and 4 are shaded and there is an X on the line between areas 1 and 2.
c. Areas 6 and 7 are shaded and there is an X on the line between areas 1 and 4.
d. Areas 2 and 3 are shaded and there is an X on the line between areas 1 and 4.
e. Areas 3 and 4 are shaded and there is an X in area 1.

ANS: E PTS: 2

17. For Syllogistic Form 6C, the mood and figure is:
a. **AII**-4
b. **EOO**-2
c. **AOO**-3
d. **EOO**-3
e. **IOO**-1

ANS: D PTS: 2

18. For Syllogistic Form 6C, the answer from the Boolean standpoint is:
a. Invalid, exclusive premises.
b. Invalid, illicit major.
c. Invalid, existential fallacy.
d. Invalid, illicit minor.
e. Valid, no fallacy.

ANS: A PTS: 2

19. Given the following syllogism:

All unicorns are gazelles.
No lions are gazelles.
Some unicorns are not lions.

This syllogism commits the existential fallacy from:
a. The Aristotelian standpoint but not from the Boolean standpoint.
b. The Boolean standpoint but not from the Aristotelian standpoint.

c. Both the Boolean and the Aristotelian standpoints.
d. Neither the Boolean nor the Aristotelian standpoint.
e. The syllogistic standpoint.

ANS: C PTS: 2

20. Given the following syllogistic form:

All P are M.
All M are S.
Some S are P.

This form is:
a. Conditionally valid from the Boolean standpoint.
b. Conditionally valid from the Aristotelian standpoint.
c. Valid from the Aristotelian standpoint.
d. Valid from the Boolean standpoint.
e. Invalid from the Aristotelian standpoint.

ANS: B PTS: 2

Syllogism 1C
Given the following syllogism:
No altered photos are accurate representations, so some inaccurate representations are attractive images, since some unaltered photos are not unattractive images.

21. After reducing the number of terms in Syllogism 1C, the conclusion is:
a. No altered photos are accurate representations.
b. Some attractive images are not altered photos.
c. Some attractive images are not accurate representations.
d. Some accurate representations are not attractive images.
e. Some accurate representations are unattractive images.

ANS: C PTS: 2

22. For Syllogism 1C, the major premise is:
a. No altered photos are inaccurate representations.
b. Some attractive images are not altered photos.
c. Some attractive images are not accurate representations.
d. No altered photos are accurate representations.
e. Some accurate representations are not attractive images.

ANS: D PTS: 2

23. For Syllogism 1C, the minor premise is:
a. Some attractive images are accurate representations.
b. Some attractive images are not accurate representations.
c. Some altered photos are not attractive images.
d. No altered photos are accurate representations.
e. Some attractive images are not altered photos.

ANS: E PTS: 2

Syllogism 2C
Given the following syllogism:

No dogs that do not love children are reliable watchdogs, since all dogs that don't bite are unreliable watchdogs, and no dogs that love children are dogs that bite.

24. After reducing the number of terms in Syllogism 2C, the conclusion is:
    a. All reliable watchdogs are dogs that love children.
    b. No dogs that love children are dogs that bite.
    c. All reliable watchdogs are dogs that bite.
    d. All dogs that bite are reliable watchdogs.
    e. All dogs that love children are reliable watchdogs.

    ANS: A PTS: 2

25. For Syllogism 2C, the major premise is:
    a. All dogs that don't bite are dogs that love children.
    b. All reliable watchdogs are dogs that love children.
    c. No dogs that love children are dogs that bite.
    d. All reliable watchdogs are dogs that bite.
    e. All dogs that love children are reliable watchdogs.

    ANS: C PTS: 2

26. For Syllogism 2C, the minor premise is:
    a. All dogs that love children are reliable watchdogs.
    b. All reliable watchdogs are dogs that bite.
    c. No dogs that love children are dogs that bite.
    d. All dogs that bite are reliable watchdogs.
    e. All reliable watchdogs are dogs that love children.

    ANS: B PTS: 2

Syllogism 3C
Given the following syllogism:
There are applicants who are not trustworthy, because whoever has a criminal record is untrustworthy, and several applicants have criminal records.

27. After translating Syllogism 3C into standard form, the conclusion is:
    a. No people with criminal records are trustworthy people.
    b. Some applicants have criminal records.
    c. Some applicants are people with criminal records.
    d. Some applicants are not trustworthy people.
    e. Some trustworthy people are not applicants.

    ANS: D PTS: 2

28. For Syllogism 3C, the major premise is:
    a. No people with criminal records are trustworthy people.
    b. Some applicants are not trustworthy people.
    c. All untrustworthy people are people with criminal records.
    d. Several applicants have criminal records.
    e. Some applicants are people with criminal records.

    ANS: A PTS: 2

29. For Syllogism 3C, the minor premise is:
    a. Some trustworthy people are not applicants.

b. No people with criminal records are trustworthy people.
c. Several applicants have criminal records.
d. Some applicants are not trustworthy people.
e. Some applicants are people with criminal records.

ANS: E PTS: 2

Syllogism 4C
Given the following syllogism:
A boy is uncontrollable unless he has good parenting. Thus, only the choirboys are controllable, since the only boys with good parenting are choirboys.

30. After translating Syllogism 4C into standard form, the conclusion is:
a. All choirboys are controllable boys.
b. All boys with good parenting are choirboys.
c. All controllable boys are choirboys.
d. All choirboys are boys with good parenting.
e. All controllable boys are boys with good parenting.

ANS: C PTS: 2

31. For Syllogism 4C, the major premise is:
a. All controllable boys are boys with good parenting.
b. All controllable boys are choirboys.
c. All choirboys are controllable boys.
d. All boys with good parenting are choirboys.
e. All choirboys are boys with good parenting.

ANS: D PTS: 2

32. For Syllogism 4C, the minor premise is:
a. All controllable boys are boys with good parenting.
b. All controllable boys are choirboys.
c. All boys with good parenting are controllable boys.
d. All choirboys are boys with good parenting.
e. All boys with good parenting are choirboys.

ANS: A PTS: 2

33. Given the following enthymeme:
Poorly managed airlines never earn a profit, but Speedy Air does earn a profit.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Speedy Air is well managed. (Premise)
b. Speedy Air should be subject to price controls. (Conclusion)
c. Speedy air is not poorly managed. (Conclusion)
d. Speedy Air's investors are pleased. (Conclusion)
e. Only well managed airlines earn a profit. (Premise)

ANS: C PTS: 2

34. Given the following enthymeme:
Democratic countries have fair elections, so North Korea must not be a democratic country.

The statement needed to convert the enthymeme into a valid syllogism is:

a. North Korea has never been a democratic country. (Conclusion)
b. North Korea does not have fair elections. (Premise)
c. Kim Jong Il runs North Korea. (Conclusion)
d. North Korea is run by a dictator. (Premise)
e. All countries that have fair elections are democratic countries. (Premise)

ANS: B PTS: 2

35. Given the following enthymeme:
Any contract induced by bribery should be rescinded, but many military contracts fall precisely into this category.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Many military contracts are induced by bribery. (Premise)
b. Many military contracts are not induced by bribery. (Premise)
c. Many Pentagon officials succumb to bribery. (Conclusion)
d. Many military contracts should not be rescinded. (Conclusion)
e. Many military contracts should be rescinded. (Conclusion)

ANS: E PTS: 2

Sorites 1C
Given the following sorites:

All G are B.
Some S are T.
No G are K.
No T are B.
Some K are not S.

36. For Sorites 1C, the correct standard form is:
a. Some K are not S.
Some S are T.
No T are B.
All G are B.
No G are K.
b. Some S are T.
No T are B.
All G are B.
No G are K.
Some K are not S.
c. No T are B.
Some S are T.
All G are B.
No G are K.
Some K are not S.
d. Some S are T.
No T are B.
No G are K.
All G are B.
Some K are not S.
e. Some S are not T.
All T are B.
No G are B.

Some G are not K.
Some K are S.

ANS: B PTS: 2

37. For Sorites 1C, the first intermediate conclusion is:
    a. Some S are not B.
    b. No T are G.
    c. Some S are B.
    d. No K are B.
    e. Some B are not S.

    ANS: A PTS: 2

38. For Sorites 1C, the second intermediate conclusion is:
    a. No K are B.
    b. No B are T.
    c. Some S are G.
    d. Some S are not G.
    e. Some B are not S.

    ANS: D PTS: 2

39. For Sorites 1C, the correct answer is:
    a. Cogent.
    b. Sound.
    c. Strong.
    d. Valid.
    e. Invalid.

    ANS: E PTS: 2

40. Given the following sorites:

    All H are D.
    No D are N.
    All N are A.
    Some J are A.
    Some J are not H.

    This sorites is:
    a. Invalid because only one term in the conclusion is distributed.
    b. Invalid because it has more than two affirmative premises.
    c. Invalid because one of the middle terms is undistributed.
    d. Invalid because it draws a particular conclusion from three universal premises.
    e. Valid because it breaks no rules.

    ANS: C PTS: 2

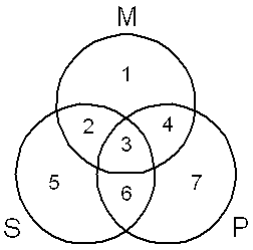
Chapter 5 Test D

MULTIPLE CHOICE

Syllogistic Form 1D
Given the following syllogistic form:

All P are M.
No S are M.
All S are P.

1. For Syllogistic Form 1D, after filling in the Venn diagram,



   a. Areas 2, 3, 6, and 7 are shaded, and there are no other marks.
   b. Areas 3, 4, 5, and 6 are shaded.
   c. Areas 2 and 3 are shaded, and there is an X in area 4.
   d. Areas 2, 3, 5, 6, and 7 are shaded.
   e. Areas 2, 3, 6, and 7 are shaded, and there is an X in area 5.

   ANS: A PTS: 2

2. For Syllogistic Form 1D, the mood and figure is:
   a. **AIA**-2.
   b. **AOA**-3.
   c. **EAE**-2.
   d. **AEA**-2.
   e. **AEA**-3.

   ANS: D PTS: 2

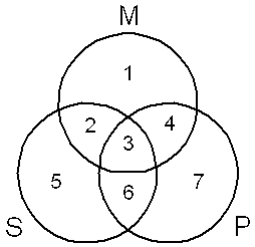
3. For Syllogistic Form 1D, the answer from the Boolean standpoint is:
   a. Valid, no fallacy.
   b. Invalid, illicit minor.
   c. Invalid, drawing an affirmative conclusion from a negative premise.
   d. Invalid, undistributed middle.
   e. Invalid, existential fallacy.

   ANS: C PTS: 2

Syllogistic Form 2D
Given the following syllogistic form:

Some M are not P.
Some S are M.
Some S are not P.

4. For Syllogistic Form 2D, after filling in the Venn diagram,



   a. There is an X on the line between areas 1 and 4 and between areas 2 and 3.
   b. There is an X on the line between areas 1 and 2 and between areas 2 and 3.
   c. There is an X in area 1 and in area 3.
   d. There is an X on the line between areas 1 and 2 and in area 3.
   e. There is an X on the line between areas 1 and 4 and between areas 2 and 5.

   ANS: B PTS: 2

5. For Syllogistic Form 2D, the mood and figure is:
   a. **IOI**-1.
   b. **OEO**-1.
   c. **OIO**-1.
   d. **IOI**-4.
   e. **OIO**-4.

   ANS: C PTS: 2

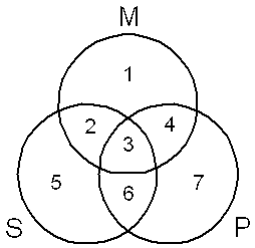
6. For Syllogistic Form 2D, the answer from the Boolean standpoint is:
   a. Valid, no fallacy.
   b. Invalid, illicit minor.
   c. invalid, drawing a negative conclusion from affirmative premises.
   d. Invalid, illicit major.
   e. Invalid, undistributed middle.

   ANS: E PTS: 2

   Syllogistic Form 3D
   Given the following syllogistic form:

   All M are P.
   <u>Some M are S.</u>
   Some S are P.

7. For Syllogistic Form 3D, after filling in the Venn diagram,



a. Areas 1 and 2 are shaded, and there is an X in area 3.
b. Areas 3 and 4 are shaded, and there is an X in area 2.
c. Areas 1 and 2 are shaded, and there is an X on the line between areas 3 and 4.
d. Areas 1 and 4 are shaded, and there is an X in area 3.
e. Areas 1 and 2 are shaded, and there is an X in area 4.

ANS: A PTS: 2

8. For Syllogistic Form 3D, the mood and figure is:
a. **AII**-4.
b. **AOO**-4.
c. **AII**-2.
d. **AEE**-3.
e. **AII**-3.

ANS: E PTS: 2

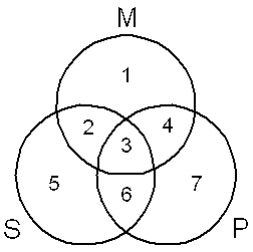
9. For Syllogistic Form 3D, the answer from the Boolean standpoint is:
a. Invalid, undistributed middle.
b. Invalid, illicit minor.
c. Invalid, drawing an affirmative conclusion from a negative premise.
d. Valid, no fallacy.
e. Invalid, exclusive premises.

ANS: D PTS: 2

Syllogistic Form 4D
Given the following syllogistic form:

All M are P.
No M are S.
No S are P.

10. For Syllogistic Form 4D, after filling in the Venn diagram,



a. Areas 1, 2, and 4 are shaded, and there are no other marks.
b. Areas 1, 2, and 3 are shaded, and there are no other marks.
c. Areas 1, 3, and 4 are shaded.
d. Areas 1, 2, and 3 are shaded, and there is an X in area 4.
e. Areas 2 and 3, and 4 are shaded.

ANS: B PTS: 2

11. For Syllogistic Form 4D, the mood and figure is:
a. **EAA**-3.
b. **AII**-2.
c. **AEE**-3.

d. **AOO**-3.
e. **AEE**-2.

ANS: C PTS: 2

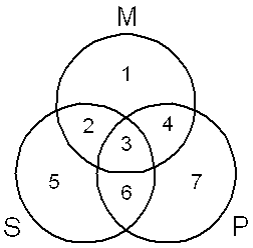
12. For Syllogistic Form 4D, the answer from the Boolean standpoint is:
    a. Invalid, drawing a negative conclusion from affirmative premises.
    b. Invalid, illicit minor.
    c. Invalid, illicit major.
    d. Valid, no fallacy.
    e. Invalid, existential fallacy.

    ANS: C PTS: 2

Syllogistic Form 5D
Given the following syllogistic form:

No M are P.
All S are M.
Some S are not P.

13. For Syllogistic Form 5D, after filling in the Venn diagram,



    a. Areas 3, 4, 5 and 6 are shaded, and there are no other marks.
    b. Areas 3 and 4 are shaded, and there is an X on the line between areas 2 and 5.
    c. Areas 1, 2, and 3 are shaded.
    d. Areas 3, 4, 5, and 6 are shaded, and there is an X in area 2.
    e. Areas 3, 4, 5, and 6 are shaded, and there is an X in area 6.

    ANS: A PTS: 2

14. For Syllogistic Form 5D, the mood and figure is:
    a. **EAI**-1.
    b. **AEI**-4.
    c. **AEO**-1.
    d. **EAO**-4.
    e. **EAO**-1.

    ANS: E PTS: 2

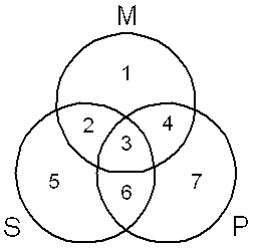
15. For Syllogistic Form 5D, the answer from the Boolean standpoint is:
    a. Invalid, undistributed middle.
    b. Invalid, existential fallacy.
    c. Invalid, illicit major.
    d. Invalid, exclusive premises.
    e. Valid, no fallacy.

ANS: B PTS: 2

Syllogistic Form 6D
Given the following syllogistic form:

All P are M.
All M are S.
All S are P.

16. For Syllogistic Form 6D, after filling in the Venn diagram,



a. Areas 1, 4, 6, and 7 are shaded, and there are no other marks.
b. Areas 2, 3, and 4 are shaded, and there are no other marks.
c. Areas 2, 3, 4, and 6 are shaded.
d. Areas 1, 4, 6, and 7 are shaded, and there is an X in area 3.
e. Areas 1, 2, 4, 5, 6, and 7 are shaded.

ANS: A PTS: 2

17. For Syllogistic Form 6D, the mood and figure is:
a. **AAA**-1.
b. **III**-1.
c. **EEE**-4.
d. **AAA**-4.
e. **AEA**-4.

ANS: D PTS: 2

18. For Syllogistic Form 6D, the answer from the Boolean standpoint is:
a. Invalid, illicit major.
b. Valid, no fallacy.
c. Invalid, existential fallacy.
d. Invalid, exclusive premises.
e. Invalid, illicit minor.

ANS: E PTS: 2

19. Given the following syllogism:

No pigs are bears.
All bears are animals.
Some animals are not pigs.

This syllogism is:
a. Valid from the Aristotelian standpoint because animals exist.
b. Invalid from the Aristotelian standpoint.

c. Valid from the Aristotelian standpoint because bears exist.
d. Valid from the Boolean standpoint.
e. Valid from the Aristotelian standpoint because pigs exist.

ANS: C PTS: 2

20. Given the following syllogism:

No unicorns are mules.
All unicorns are animals.
Some animals are not mules.

This syllogism:
a. Is valid from both the Boolean and Aristotelian standpoints.
b. Is valid from the Boolean standpoint only.
c. Commits the existential fallacy from the Boolean standpoint only.
d. Commits the existential fallacy from both standpoints.
e. Commits the existential fallacy from the Aristotelian standpoint only.

ANS: D PTS: 2

Syllogism 1D
Given the following syllogism:
All unrewarding occupations are unsatisfying jobs, because no meaningless employments are satisfying jobs and all meaningful employments are rewarding occupations.

21. After reducing the number of terms in Syllogism 1D, the conclusion is:
a. All meaningful employments are satisfying jobs.
b. All satisfying jobs are rewarding occupations.
c. All satisfying jobs are meaningful employments.
d. All meaningful employments are rewarding occupations.
e. All rewarding occupations are satisfying jobs.

ANS: B PTS: 2

22. For Syllogism 1D, the major premise is:
a. All satisfying jobs are rewarding occupations.
b. No meaningful employments are unrewarding occupations.
c. All meaningful employments are rewarding occupations.
d. All satisfying jobs are meaningful employments.
e. All rewarding occupations are meaningful employments.

ANS: C PTS: 2

23. For Syllogism 1D, the minor premise is:
a. All satisfying jobs are meaningful employments.
b. All satisfying jobs are rewarding occupations.
c. No meaningful employments are unrewarding occupations.
d. No satisfying jobs are meaningless employments.
e. All meaningful employments are rewarding occupations.

ANS: A PTS: 2

Syllogism 2D
Given the following syllogism:

Some low class characters are not people with money, so some people without money are not honest souls, since no dishonest souls are high class characters.

24. After reducing the number of terms in Syllogism 2D, the conclusion is:
    a. Some people without money are not high class characters.
    b. All dishonest souls are low class characters.
    c. Some people with money are not honest souls.
    d. All high class characters are honest souls.
    e. Some people without money are not honest souls.

    ANS: E PTS: 2

25. For Syllogism 2D, the major premise is:
    a. Some people without money are not honest souls.
    b. Some people without money are not high class characters.
    c. All dishonest souls are low class characters.
    d. All high class characters are honest souls.
    e. No low class characters are honest souls.

    ANS: D PTS: 2

26. For Syllogism 2D, the minor premise is:
    a. Some people without money are not honest souls.
    b. Some high class characters are not people without money.
    c. Some people without money are not high class characters.
    d. No high class characters are dishonest souls.
    e. All high class characters are honest souls.

    ANS: C PTS: 2

Syllogism 3D

Given the following syllogism:
Edward gets angry whenever customers complain. Thus, Edward must have been angry yesterday, because customers were complaining yesterday.

27. After translating Syllogism 3D into standard form, the conclusion is:
    a. All times Edward gets angry are times customers complain.
    b. All times identical to yesterday are times Edward gets angry.
    c. All times customers complain are times Edward gets angry.
    d. All persons identical to Edward are persons who got angry yesterday.
    e. All times identical to yesterday are times customers complain.

    ANS: B PTS: 2

28. For Syllogism 3D, the major premise is:
    a. All times Edward gets angry are times customers complain.
    b. All times identical to yesterday are times customers complain.
    c. All times customers complain are times Edward gets angry.
    d. All persons identical to Edward are persons who get angry when customers complain.
    e. All times identical to yesterday are times Edward gets angry.

    ANS: C PTS: 2

29. For Syllogism 3D, the minor premise is:
    a. All times Edward gets angry are times customers complain.

b. All times customers complain are times identical to yesterday.
c. All times identical to yesterday are times Edward gets angry.
d. All times customers complain are times Edward gets angry.
e. All times identical to yesterday are times customers complain.

ANS: E PTS: 2

Syllogism 4D
Given the following syllogism:
A few Hondas are not on sale, because the cars with green tags are not on sale and a few Hondas have green tags.

30. After translating Syllogism 4D into standard form, the conclusion is:
a. Some cars that are on sale are not Hondas.
b. Some Hondas are cars with green tags.
c. All cars with green tags are cars that are not on sale.
d. Some Hondas are not cars that are on sale.
e. No cars with green tags are cars on sale.

ANS: D PTS: 2

31. For Syllogism 4D, the major premise is:
a. No cars with green tags are cars on sale.
b. All cars with green tags are not cars that are on sale.
c. All cars with green tags are cars that are not on sale.
d. Some Hondas are not cars that are on sale.
e. Some Hondas are cars with green tags.

ANS: A PTS: 2

32. For Syllogism 4D, the minor premise is:
a. Some Hondas are not cars that are on sale.
b. Some Hondas are cars with green tags.
c. No cars with green tags are cars on sale.
d. Some Hondas are not cars with green tags.
e. All cars with green tags are cars that are not on sale.

ANS: B PTS: 2

33. Given the following enthymeme:
Schools cannot discriminate if they receive federal financing, and Hamilton College receives federal financing.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Not all schools receive federal financing. (Premise)
b. Some colleges other than Hamilton College discriminate. (Conclusion)
c. Hamilton College can discriminate. (Conclusion)
d. Hamilton College cannot discriminate. (Premise)
e. Hamilton College cannot discriminate. (Conclusion)

ANS: E PTS: 2

34. Given the following enthymeme:
Nuclear power does not cause global warming, so it must be good.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Nuclear power is less efficient than hydroelectric power. (Premise)
b. Nuclear power produces a great deal of radioactive waste. (Premise)
c. Any kind of power that does not cause global warming is good. (Premise)
d. Nuclear power is good. (Conclusion)
e. Global warming can possibly be corrected through nuclear power. (Conclusion)

ANS: C PTS: 2

35. Given the following enthymeme:
Street gangs are a top priority for the FBI because they're involved in organized crime.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Street gangs have been involved in organized crime for years. (Premise)
b. Organized crime includes theft, murder, extortion, and prostitution. (Conclusion)
c. The FBI will never succeed in eradicating street gangs. (Conclusion)
d. Groups involved in organized crime are a top priority for the FBI. (Premise)
e. Any gang that deals in street drugs is involved in organized crime. (Premise)

ANS: D PTS: 2

Sorites 1D
Given the following sorites:

Some S are R.
No B are S.
All R are H.
All M are B.
Some H are not M.

36. For Sorites 1D, the correct standard form is:
a. All M are B.
No B are S.
Some S are R.
All R are H.
Some H are not M.
b. All R are H.
Some H are not M.
All M are B.
No B are S.
Some S are R.
c. All R are H.
Some S are R.
No B are S.
All M are B.
Some H are not M.
d. All R are H.
Some S are R.
All M are B.
No B are S.
Some H are not M.
e. No B are S.
All M are B.
Some S are R.

All R are H.
Some H are not M.

ANS: A PTS: 2

37. For Sorites 1D, the first intermediate conclusion is:
    a. Some S are H.
    b. Some R are not S.
    c. All M are S.
    d. No M are S.
    e. Some R are not M.

    ANS: D PTS: 2

38. For Sorites 1D, the second intermediate conclusion is:
    a. Some S are H.
    b. No M are B.
    c. Some R are not B.
    d. No M are S.
    e. Some R are not M.

    ANS: E PTS: 2

39. For Sorites 1D, the correct answer is:
    a. Invalid.
    b. Sound.
    c. Valid.
    d. Unsound.
    e. Cogent.

    ANS: C PTS: 2

40. Given the following sorites:

    Some G are A.
    No G are K.
    All N are K.
    All F are N.
    No F are A.

    This sorites is:
    a. Invalid because one of the middle terms is undistributed.
    b. Invalid because a term is distributed in the conclusion but not in the premise.
    c. Invalid because the conclusion in negative but three premises are affirmative.
    d. Valid because no rules are broken.
    e. Valid because a negative premise requires a negative conclusion.

    ANS: B PTS: 2

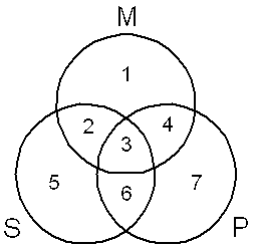
Chapter 5 Test E

MULTIPLE CHOICE

Syllogistic Form 1E
Given the following syllogistic form:

No P are M.
Some S are not M.
Some S are not P.

1. For Syllogistic Form 1E, after filling in the Venn diagram,



   a. Areas 3 and 4 are shaded, and there is an X in area 5.
   b. Areas 1 and 2 are shaded, and there is an X on the line between areas 5 and 6.
   c. Areas 6 and 7 are shaded, and there is an X in area 5.
   d. Areas 3 and 4 are shaded, and there is an X on the line between areas 5 and 6.
   e. Areas 3, 4, 5 and 6 are shaded.

   ANS: D PTS: 2

2. For Syllogistic Form 1E, the mood and figure is:
   a. **EOO**-4.
   b. **AOO**-4.
   c. **EOO**-2.
   d. **EII**-2.
   e. **EOO**-3.

   ANS: C PTS: 2

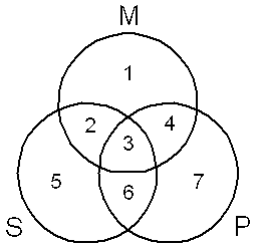
3. For Syllogistic Form 1E, the answer from the Boolean standpoint is:
   a. Invalid, exclusive premises.
   b. Invalid, drawing a negative conclusion from negative premises.
   c. Valid, no fallacy.
   d. Invalid, existential fallacy.
   e. Invalid, illicit major.

   ANS: A PTS: 2

Syllogistic Form 2E
Given the following syllogistic form:

All P are M.
No M are S.
Some S are not P.

4. For Syllogistic Form 2E, after filling in the Venn diagram,



   a. Areas 1, 4, 6, and 7 are shaded.
   b. Areas 1, 3, and 4 are shaded.
   c. Areas 1, 4, 6, and 7 are shaded.
   d. Areas 2, 3, 6, and 7 are shaded, and there is an X in area 5.
   e. Areas 2, 3, 6, and 7 are shaded, and there are no other marks.

   ANS: E PTS: 2

5. For Syllogistic Form 2E, the mood and figure is:
   a. **AIO**-1.
   b. **AEO**-4.
   c. **AEO**-1.
   d. **AIO**-4.
   e. **EAO**-4.

   ANS: B PTS: 2

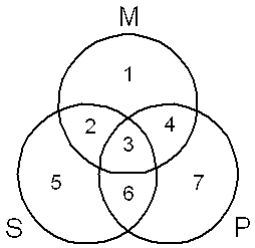
6. For Syllogistic Form 2E, the answer from the Boolean standpoint is:
   a. Invalid, undistributed middle.
   b. Valid, no fallacy.
   c. Invalid, existential fallacy.
   d. Invalid, exclusive premises.
   e. Invalid, illicit minor.

   ANS: C PTS: 2

   Syllogistic Form 3E
   Given the following syllogistic form:

   All M are P.
   <u>Some M are not S.</u>
   Some S are P.

7. For Syllogistic Form 3E, after filling in the Venn diagram,



a. Areas 3 and 4 are shaded, and there is an X in area 1.
b. Areas 1 and 2 are shaded, and there is an X in area 4.
c. Areas 1 and 2 are shaded, and there is an X on the line between areas 3 and 4.
d. Areas 1 and 2 are shaded, and there is an X on the line between areas 3 and 6.
e. Areas 3 and 4 are shaded, and there is an X in area 2.

ANS: B PTS: 2

8. For Syllogistic Form 3E, the mood and figure is:
a. **AOI**-4.
b. **AIO**-3.
c. **AOI**-2.
d. **AIO**-2.
e. **AOI**-3.

ANS: E PTS: 2

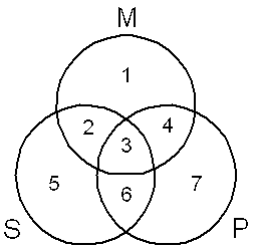
9. For Syllogistic Form 3E, the answer from the Boolean standpoint is:
a. Invalid, drawing an affirmative conclusion from a negative premise.
b. Invalid, undistributed middle.
c. Valid, no fallacy.
d. Invalid, illicit minor.
e. Invalid, existential fallacy.

ANS: A PTS: 2

Syllogistic Form 4E
Given the following syllogistic form:

All P are M.
No S are M.
No S are P.

10. For Syllogistic Form 4E, after filling in the Venn diagram,



a. Areas 2, 3, 4, and 7 are shaded.
b. Areas 3, 4, 5, and 6 are shaded, and there is an X in area 7.
c. Areas 2, 3, 6, and 7 are shaded, and there is an X in area 5.
d. Areas 2, 3, 6, and 7 are shaded, and there are no other marks.
e. Areas 3, 4, 6, and 6 are shaded, and there are no other marks.

ANS: D PTS: 2

11. For Syllogistic Form 4E, the mood and figure is:
a. **EAA**-3.
b. **EII**-2.
c. **AEE**-3.

d. **AII**-2.
e. **AEE**-2.

ANS: E PTS: 2

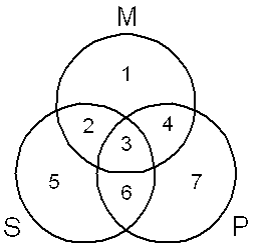
12. For Syllogistic Form 4E, the answer from the Boolean standpoint is:
a. Invalid, illicit minor.
b. Invalid, illicit major.
c. Invalid, drawing a negative conclusion from a negative premise.
d. Valid, no fallacy.
e. Invalid, undistributed middle.

ANS: D PTS: 2

Syllogistic Form 5E
Given the following syllogistic form:

All P are M.
Some M are S.
Some S are P.

13. For Syllogistic Form 5E, after filling in the Venn diagram,



a. Areas 1 and 2 are shaded, and there is an X in area 3.
b. Areas 6 and 7 are shaded, and there is an X on the line between areas 2 and 3.
c. Areas 3 and 4 are shaded, and there is an X in area 2.
d. Areas 6 and 7 are shaded, and there is an X in area 2.
e. Areas 6 and 7 are shaded, and there is an X in area 3.

ANS: B PTS: 2

14. For Syllogistic Form 5E, the mood and figure is:
a. **AII**-1.
b. **AOO**-4.
c. **AII**-4.
d. **AOO**-1.
e. **AII**-2.

ANS: C PTS: 2

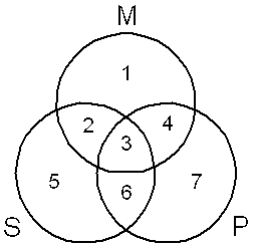
15. For Syllogistic Form 5E, the answer from the Boolean standpoint is:
a. Invalid, undistributed middle.
b. Invalid, drawing a negative conclusion from affirmative premises.
c. Invalid, exclusive premises.
d. Valid, no fallacy.
e. Invalid, existential fallacy.

ANS: A PTS: 2

Syllogistic Form 6E
Given the following syllogistic form:

Some M are P.
Some S are not M.
Some S are not P.

16. For Syllogistic Form 6E, after filling in the Venn diagram,



a. Areas 3, 4, 5, and 6 are shaded.
b. There is an X on the line between areas 2 and 3 and between areas 3 and 4.
c. There is an X in area 4 and in area 5.
d. There is an X on the line between areas 1 and 2 and between areas 5 and 6.
e. There is an X on the line between areas 3 and 4 and between areas 5 and 6.

ANS: E PTS: 2

17. For Syllogistic Form 6E, the mood and figure is:
a. **OII**-4.
b. **IOO**-1.
c. **IOO**-4.
d. **EOO**-1.
e. **OII**-1.

ANS: B PTS: 2

18. For Syllogistic Form 6E, the answer from the Boolean standpoint is:
a. Invalid, illicit major.
b. Invalid, undistributed middle.
c. Invalid, exclusive premises.
d. Invalid, illicit minor.
e. Valid, no fallacy.

ANS: A PTS: 2

19. Given the following syllogism:

No sheep are mammals.
All goats are mammals.
Some goats are not sheep.

This syllogism is:
a. Valid from the Aristotelian standpoint because mammals exist.
b. Valid from the Boolean standpoint.

c. Valid from the Aristotelian standpoint because goats exist.
d. Invalid from the Aristotelian standpoint.
e. Valid from the Aristotelian standpoint because sheep exist.

ANS: C PTS: 2

20. Given the following syllogism:

All mammals are animals.
All unicorns are animals.
All unicorns are mammals.

This syllogism:
a. Commits the existential fallacy from the Aristotelian standpoint only.
b. Is valid from both the Boolean and the Aristotelian standpoints.
c. Is valid from the Boolean standpoint only.
d. Is invalid from both the Boolean and the Aristotelian standpoints.
e. Commits the existential fallacy from both standpoints.

ANS: D PTS: 2

Syllogism 1E
Given the following syllogism:
Some workers without papers are licensed drivers, so some workers with papers are not documented aliens, for some undocumented aliens are not unlicensed drivers.

21. After reducing the number of terms in Syllogism 1E, the conclusion is:
a. Some licensed drivers are not workers with papers.
b. Some workers without papers are licensed drivers.
c. Some documented aliens are not workers with papers.
d. Some workers with papers are not documented aliens.
e. Some licensed drivers are not documented aliens.

ANS: D PTS: 2

22. For Syllogism 1E, the major premise is:
a. Some documented aliens are not licensed drivers.
b. Some licensed drivers are not workers with papers.
c. Some workers with papers are not licensed drivers.
d. Some workers with papers are not documented aliens.
e. Some licensed drivers are not documented aliens.

ANS: E PTS: 2

23. For Syllogism 1E, the minor premise is:
a. Some licensed drivers are not workers with papers.
b. Some workers with papers are not documented aliens.
c. Some documented aliens are not licensed drivers.
d. Some workers with papers are not licensed drivers.
e. Some licensed drivers are not documented aliens.

ANS: A PTS: 2

Syllogism 2E
Given the following syllogism:

No unbearable experiences are pleasant flights, because all bumpy flights are unpleasant flights and all smooth flights are bearable experiences.

24. After reducing the number of terms in Syllogism 2E, the conclusion is:
    a. All pleasant flights are smooth flights.
    b. No smooth flights are unbearable experiences.
    c. All pleasant flights are bearable experiences.
    d. All smooth flights are bearable experiences.
    e. All bearable experiences are pleasant flights.

    ANS: C PTS: 2

25. For Syllogism 2E, the major premise is:
    a. All bearable experiences are pleasant flights.
    b. All smooth flights are bearable experiences.
    c. All pleasant flights are bearable experiences.
    d. All pleasant flights are smooth flights.
    e. All bearable experiences are smooth flights.

    ANS: B PTS: 2

26. For Syllogism 2E, the minor premise is:
    a. All smooth flights are pleasant flights.
    b. All pleasant flights are bearable experiences.
    c. All pleasant flights are smooth flights.
    d. All smooth flights are bearable experiences.
    e. All bearable experiences are smooth flights.

    ANS: C PTS: 2

Syllogism 3E

Given the following syllogism:
Tulips are not daffodils. Hence, since the only flowers in the garden are daffodils, there are no tulips in the garden.

27. After translating Syllogism 3E into standard form, the conclusion is:
    a. No tulips are daffodils.
    b. All flowers in the garden are daffodils.
    c. Some flowers in the garden are daffodils.
    d. Some flowers in the garden are not tulips.
    e. No flowers in the garden are tulips.

    ANS: E PTS: 2

28. For Syllogism 3E, the major premise is:
    a. Some flowers in the garden are daffodils.
    b. No tulips are daffodils.
    c. No flowers in the garden are tulips.
    d. Some tulips are not daffodils.
    e. All flowers in the garden are daffodils.

    ANS: B PTS: 2

29. For Syllogism 3E, the minor premise is:
    a. All flowers in the garden are daffodils.

b. No flowers in the garden are daffodils.
c. No tulips are daffodils.
d. Some flowers in the garden are daffodils.
e. No flowers in the garden are tulips.

ANS: A PTS: 2

Syllogism 4E
Given the following syllogism:
Spencer is happy whenever he wins at poker, and he won tonight. Thus, Spencer is happy tonight.

30. After translating Syllogism 4E into standard form, the conclusion is:
a. All times Spencer wins at poker are times Spencer is happy.
b. All persons identical to Spencer are persons who are happy tonight.
c. All times identical to tonight are times Spencer wins at poker.
d. All times identical to tonight are times Spencer is happy.
e. All times Spencer is happy are time identical to tonight.

ANS: D PTS: 2

31. For Syllogism 4E, the major premise is:
a. All times identical to tonight are times Spencer is happy.
b. All persons identical to Spencer are persons who are happy when they win at poker.
c. All times Spencer wins at poker are times Spencer is happy.
d. All times Spencer is happy are times Spencer wins at poker.
e. All times identical to tonight are times Spencer wins at poker.

ANS: C PTS: 2

32. For Syllogism 4E, the minor premise is:
a. All times identical to tonight are times Spencer is happy.
b. All times identical to tonight are times Spencer wins at poker.
c. All persons identical to Spencer are persons who win at poker tonight.
d. All times Spencer wins at poker are times identical to tonight.
e. All times Spencer wins at poker are times Spencer is happy.

ANS: B PTS: 2

33. Given the following enthymeme:
Any vehicle that gets good gas mileage is environmentally friendly, and hybrid cars get good gas mileage.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Hybrid cars are environmentally friendly. (Conclusion)
b. Some cars that get good gas mileage are not hybrids. (Premise)
c. Some hybrid cars are environmentally friendly cars. (Conclusion)
d. Even environmentally friendly cars cause some pollution. (Conclusion)
e. Hybrid cars cause less pollution than conventional cars. (Premise)

ANS: A PTS: 2

34. Given the following enthymeme:
Tiffany sells only expensive watches, so Cartier watches must be expensive.

The statement needed to convert the enthymeme into a valid syllogism is:

a. Tiffany sells some watches that are not expensive. (Conclusion)
b. Tiffany also sells Rolex watches. (Premise)
c. The Cartier Corporation owns Tiffany. (Premise)
d. Not all Cartier watches are expensive. (Conclusion)
e. Tiffany sells Cartier watches. (Premise)

ANS: E PTS: 2

35. Given the following enthymeme:
Peaches are not ripe unless they are soft, and your peaches are not soft.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Some of your peaches are not ripe. (Premise)
b. All ripe peaches are soft peaches. (Conclusion)
c. Your peaches are not ripe. (Conclusion)
d. Your peaches are ripe. (Conclusion)
e. Not all the ripe peaches are yours. (Premise)

ANS: C PTS: 2

Sorites 1E
Given the following sorites:

All F are G.
No T are N.
Some K are N.
<u>All F are T.</u>
Some G are not K.

36. For Sorites 1E, the correct standard form is:
a. No T are N.
Some K are N.
All F are G.
<u>All F are T.</u>
Some G are not K.
b. All F are G.
All F are T.
Some K are N.
<u>No T are N.</u>
Some G are not K.
c. No T are N.
All F are T.
All F are G.
<u>Some G are not K.</u>
Some K are N.
d. Some K are N.
No T are N.
All F are T.
<u>All F are G.</u>
Some G are not K.
e. Some K are N.
Some G are not K.
All F are G.
<u>All F are T.</u>

No T are N.

ANS: D PTS: 2

37. For Sorites 1E, the first intermediate conclusion is:
    a. Some K are not F.
    b. No T are F.
    c. Some T are not K.
    d. No F are N.
    e. Some K are not T.

    ANS: E PTS: 2

38. For Sorites 1E, the second intermediate conclusion is:
    a. Some F are not K.
    b. No F are N.
    c. Some K are not F.
    d. There is no second intermediate conclusion.
    e. Some K are not T.

    ANS: C PTS: 2

39. For Sorites 1E, the correct answer is:
    a. Weak.
    b. Invalid.
    c. Valid.
    d. Sound.
    e. Cogent.

    ANS: B PTS: 2

40. Given the following sorites:

    No H are C.
    All H are R.
    All R are P.
    Some E are not P.
    Some E are not C.

    This sorites is:
    a. Invalid because it has two negative premises.
    b. Invalid because a term is distributed in the conclusion but not in the premise.
    c. Invalid because it has an affirmative premise and a negative conclusion.
    d. Valid because no rules are broken.
    e. Valid because a negative premise requires a negative conclusion.

    ANS: A PTS: 2

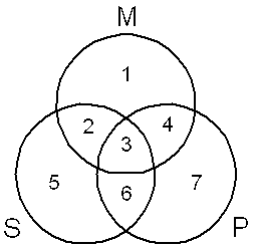
Chapter 5 Test F

MULTIPLE CHOICE

Syllogistic Form 1F
Given the following syllogistic form:

No P are M.
No S are M.
No S are P.

1. For Syllogistic Form 1F, after filling in the Venn diagram,



   a. Areas 2, 3, and 4 are shaded, and there is an X in area 5.
   b. Areas 5, 6, and 7 are shaded, and there is an X in area 2.
   c. Areas 2, 3, and 4 are shaded, and there are no other marks.
   d. Areas 2, 3, 4, and 6 are shaded.
   e. Areas 5, 6, and 7 are shaded, and there are no other marks.

   ANS: C PTS: 2

2. For Syllogistic Form 1F, the mood and figure is:
   a. **AAA**-2.
   b. **III**-3.
   c. **EEE**-3.
   d. **III**-2.
   e. **EEE**-2.

   ANS: E PTS: 2

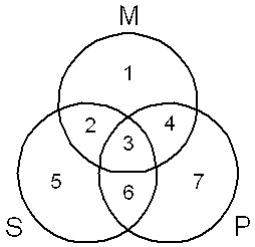
3. For Syllogistic Form 1F, the answer from the Boolean standpoint is:
   a. Invalid, exclusive premises.
   b. Invalid, illicit major.
   c. Invalid, drawing a negative conclusion from negative premises.
   d. Valid, no fallacy.
   e. Invalid, illicit minor.

   ANS: A PTS: 2

Syllogistic Form 2F
Given the following syllogistic form:

Some P are M.
All M are S.
Some S are P.

4. For Syllogistic Form 2F, after filling in the Venn diagram,



   a. Areas 1 and 4 are shaded, and there is an X on the line between areas 2 and 3.
   b. Areas 5 and 6 are shaded, and there is an X in area 3.
   c. Areas 1 and 2 are shaded, and there is an X in area 3.
   d. Areas 1 and 4 are shaded, and there is an X in area 3.
   e. Areas 1 and 4 are shaded, and there is an X on the line between areas 3 and 6.

   ANS: D PTS: 2

5. For Syllogistic Form 2F, the mood and figure is:
   a. **OAO**-4.
   b. **IAI**-4.
   c. **EAE**-4.
   d. **IAI**-1.
   e. **OAO**-1.

   ANS: B PTS: 2

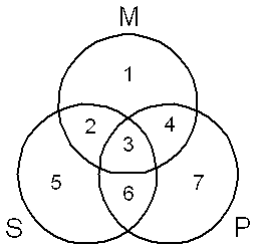
6. For Syllogistic Form 2F, the answer from the Boolean standpoint is:
   a. Invalid, undistributed middle.
   b. Invalid, illicit major.
   c. Invalid, existential fallacy.
   d. Valid, no fallacy.
   e. Invalid, illicit minor.

   ANS: D PTS: 2

   Syllogistic Form 3F
   Given the following syllogistic form:

   Some M are not P.
   Some M are S.
   Some S are not P.

7. For Syllogistic Form 3F, after filling in the Venn diagram,



a. There is an X on the line between areas 1 and 4 and between areas 2 and 3.
b. There is an X in area 1 and an X in area 2.
c. There is an X on the line between areas 1 and 2 and between areas 2 and 3.
d. Areas 1, 2, and 3 are shaded.
e. There is an X on the line between areas 1 and 2 and between areas 3 and 4.

ANS: C PTS: 2

8. For Syllogistic Form 3F, the mood and figure is:
a. **OIO**-3.
b. **IOI**-3.
c. **OIO**-2.
d. **OEO**-3.
e. **IOI**-2.

ANS: A PTS: 2

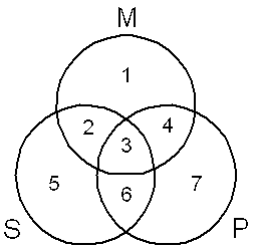
9. For Syllogistic Form 3F, the answer from the Boolean standpoint is:
a. Valid, no fallacy.
b. Invalid, exclusive premises.
c. Invalid, drawing a negative conclusion from an affirmative premise.
d. Invalid, existential fallacy.
e. Invalid, undistributed middle.

ANS: E PTS: 2

Syllogistic Form 4F
Given the following syllogistic form:

Some P are not M.
All M are S.
Some S are not P.

10. For Syllogistic Form 4F, after filling in the Venn diagram,



a. There is an X on the line between areas 2 and 5 and between areas 6 and 7.
b. Areas 1 and 4 are shaded, and there is an X on the line between areas 6 and 7.
c. Areas 5 and 6 are shaded, and there is an X in area 7.
d. Areas 1 and 4 are shaded, and there is an X on the line between areas 3 and 6.
e. Areas 2 and 3 are shaded, and there is an X on the line between areas 6 and 7.

ANS: B PTS: 2

11. For Syllogistic Form 4F, the mood and figure is:
a. **OAO**-1.
b. **OEO**-4.
c. **OAO**-4.

d. **IAI**-1.
e. **EAO**-4.

ANS: C PTS: 2

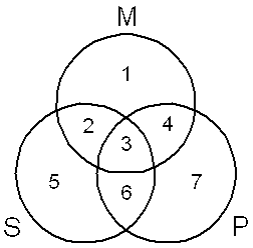
12. For Syllogistic Form 4F, the answer from the Boolean standpoint is:
a. Invalid, illicit minor.
b. Invalid, undistributed middle.
c. Invalid, drawing a negative conclusion from an affirmative premise.
d. Invalid, illicit major.
e. Valid, no fallacy.

ANS: D PTS: 2

Syllogistic Form 5F
Given the following syllogistic form:

All P are M.
No S are M.
Some S are not P.

13. For Syllogistic Form 5F, after filling in the Venn diagram,



a. Areas 1, 2, and 3 are shaded, and there is an X in area 5.
b. Areas 1, 2, and 3 are shaded, and there is an X in area 4.
c. Areas 3, 4, 5, and 6 are shaded.
d. Areas 2, 3, 6, and 7 are shaded, and there is an X in area 5.
e. Areas 2, 3, 6, and 7 are shaded, and there are no other marks.

ANS: E PTS: 2

14. For Syllogistic Form 5F, the mood and figure is:
a. **EAO**-3.
b. **AEO**-2.
c. **AEO**-3.
d. **EAO**-2.
e. **AIO**-2.

ANS: B PTS: 2

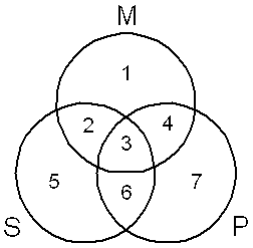
15. For Syllogistic Form 5F, the answer from the Boolean standpoint is:
a. Invalid, existential fallacy.
b. Valid, no fallacy.
c. Invalid, illicit major.
d. Invalid, exclusive premises.
e. Invalid, undistributed middle.

ANS: A PTS: 2

Syllogistic Form 6F
Given the following syllogistic form:

All M are P.
No S are M.
All S are P.

16. For Syllogistic Form 6F, after filling in the Venn diagram,



a. Areas 1, 4, 6, and 7 are shaded, and there is an X in area 3.
b. Areas 2, 3, 6, and 7 are shaded.
c. Areas 1, 4, 6, and 7 are shaded, and there are no other marks.
d. Areas 1, 2, and 3 are shaded, and there is an X in area 4.
e. Areas 1, 2, and 3 are shaded, and there are no other marks.

ANS: E PTS: 2

17. For Syllogistic Form 6F, the mood and figure is:
a. **EAE**-1.
b. **EAE**-4.
c. **AEA**-1.
d. **AIA**-1.
e. **AEA**-4.

ANS: C PTS: 2

18. For Syllogistic Form 6F, the answer from the Boolean standpoint is:
a. Invalid, drawing an affirmative conclusion from a negative premise.
b. Invalid, exclusive premises.
c. Valid, no fallacy.
d. Invalid, illicit major.
e. Invalid, existential fallacy.

ANS: A PTS: 2

19. Given the following syllogism:

All unicorns are horses.
No tigers are horses.
No tigers are unicorns.

This syllogism is:
a. Valid from the Aristotelian standpoint only.
b. Invalid from both the Boolean and the Aristotelian standpoints.

c. Valid from the Boolean standpoint only.
d. Valid from both the Boolean and the Aristotelian standpoints.
e. Conditionally valid from the Aristotelian standpoint.

ANS: D PTS: 2

20. Given the following syllogism:

All sharks are fish.
All sharks are mammals.
Some mammals are fish.

This syllogism is:
a. Commits the existential fallacy from the Aristotelian standpoint only.
b. Valid from the Aristotelian standpoint only.
c. Valid from both the Boolean and the Aristotelian standpoints.
d. Conditionally valid from the Boolean standpoint.
e. Commits the existential fallacy from both standpoints.

ANS: B PTS: 2

Syllogism 1F
Given the following syllogism:
No nondrinkers are drivers afraid of sobriety checkpoints. Hence, some drinkers are not sober drivers, since some inebriated drivers are not drivers unafraid of sobriety checkpoints.

21. After reducing the number of terms in Syllogism 1F, the conclusion is:
a. Some sober drivers are not drivers afraid of sobriety checkpoints.
b. Some drivers afraid of sobriety checkpoints are not sober drivers.
c. Some drinkers are not sober drivers.
d. Some sober drivers are not drinkers.
e. All drivers afraid of sobriety checkpoints are drinkers.

ANS: C PTS: 2

22. For Syllogism 1F, the major premise is:
a. Some sober drivers are not nondrinkers.
b. All drivers afraid of sobriety checkpoints are drinkers.
c. Some drinkers are not sober drivers.
d. All nondrinkers are drivers unafraid of sobriety checkpoints.
e. Some drivers afraid of sobriety checkpoints are not sober drivers.

ANS: E PTS: 2

23. For Syllogism 1F, the minor premise is:
a. No drivers afraid of sobriety checkpoints are drinkers.
b. All drinkers are drivers afraid of sobriety checkpoints.
c. All drivers afraid of sobriety checkpoints are drinkers.
d. Some drivers afraid of sobriety checkpoints are not sober drivers.
e. All nondrinkers are drivers unafraid of sobriety checkpoints.

ANS: C PTS: 2

Syllogism 2F
Given the following syllogism:

Some unfriendly companions are individuals with a sense of humor, for all individuals without a sense of humor are people hard to get along with, and some friendly companions are people easy to get along with.

24. After reducing the number of terms in Syllogism 2F, the conclusion is:
    a. Some individuals with a sense of humor are not friendly companions.
    b. Some individuals with a sense of humor are friendly companions.
    c. Some friendly companions are people easy to get along with.
    d. Some friendly companions are not individuals with a sense of humor.
    e. All people easy to get along with are individuals with a sense of humor.

    ANS: A PTS: 2

25. For Syllogism 2F, the major premise is:
    a. All people easy to get along with are individuals with a sense of humor.
    b. Some friendly companions are people easy to get along with.
    c. No individuals without a sense of humor are people easy to get along with.
    d. Some friendly companions are not people hard to get along with.
    e. Some individuals with a sense of humor are not friendly companions.

    ANS: B PTS: 2

26. For Syllogism 2F, the minor premise is:
    a. All individuals with a sense of humor are people easy to get along with.
    b. All people easy to get along with are individuals with a sense of humor.
    c. Some individuals with a sense of humor are not friendly companions.
    d. Some friendly companions are people easy to get along with.
    e. No people easy to get along with are individuals without a sense of humor.

    ANS: B PTS: 2

Syllogism 3F

Given the following syllogism:
Musicians are not accomplished unless they practice. Thus, Claire must not be accomplished because she never practices.

27. After translating Syllogism 3F into standard form, the conclusion is:
    a. All accomplished musicians are musicians who practice.
    b. All persons identical to Claire are not accomplished musicians.
    c. No persons identical to Claire are accomplished musicians.
    d. No persons identical to Claire are musicians who practice.
    e. Some persons identical to Claire are not accomplished musicians.

    ANS: C PTS: 2

28. For Syllogism 3F, the major premise is:
    a. All accomplished musicians are musicians who practice.
    b. No accomplished musicians are musicians who do not practice.
    c. No persons identical to Claire are accomplished musicians.
    d. No persons identical to Claire are musicians who practice.
    e. All musicians who practice are accomplished musicians.

    ANS: A PTS: 2

29. For Syllogism 3F, the minor premise is:

a. All persons identical to Claire are not musicians who practice.
b. All persons identical to Claire are musicians who do not practice.
c. No persons identical to Claire are accomplished musicians.
d. No persons identical to Claire are musicians who practice.
e. All accomplished musicians are musicians who practice.

ANS: D PTS: 2

Syllogism 4F
Given the following syllogism:
Only those students who were invited are going to the party. Hence, since a few freshmen were not invited, there are freshmen who are not going to the party.

30. After translating Syllogism 4F into standard form, the conclusion is:
a. All students going to the party are students who were invited.
b. Some freshmen are not students who were invited.
c. All students who were invited are students going to the party.
d. Some freshmen are not students going to the party.
e. Some freshmen are students who were invited.

ANS: D PTS: 2

31. For Syllogism 4F, the major premise is:
a. All students who were invited are students going to the party.
b. Some freshmen are students who were invited.
c. Some freshmen are not students who were invited.
d. Some freshmen are not students going to the party.
e. All students going to the party are students who were invited.

ANS: E PTS: 2

32. For Syllogism 4F, the minor premise is:
a. Some freshmen are students who were invited.
b. Some freshmen are not students going to the party.
c. Some freshmen are not students who were invited.
d. All students who were invited are students going to the party.
e. All students going to the party are students who were invited.

ANS: C PTS: 2

33. Given the following enthymeme:
Chewing tobacco is not a safe substitute for cigarettes. After all, it causes cancer of the mouth.

The statement needed to convert the enthymeme into a valid syllogism is:
a. There is no form of tobacco that is safe to use. (Conclusion)
b. Cigarettes cause lung cancer and emphysema. (Conclusion)
c. No product that causes cancer of the mouth is a product that anyone should use. (Premise)
d. Users of chewing tobacco are not required to go outdoors to use it. (Premise)
e. Any product that causes cancer of the mouth is not a safe substitute for cigarettes. (Premise)

ANS: E PTS: 2

34. Given the following enthymeme:
Steroid use is dangerous because it can lead to suicide.

The statement needed to convert the enthymeme into a valid syllogism is:
a. There is no proof that steroids lead to suicide. (Premise)
b. Any drug that can lead to suicide is dangerous. (Premise)
c. Steroid use is thought to be rampant in professional baseball. (Conclusion)
d. Any drug that can lead to suicide should be avoided. (Conclusion)
e. The use of steroids can improve performance in competitive sports. (Premise)

ANS: B PTS: 2

35. Given the following enthymeme:
Wherever guns are readily available senseless killings occur, and guns are readily available in the U.S.

The statement needed to convert the enthymeme into a valid syllogism is:
a. The ownership and transfer of handguns in the U.S. should be banned. (Premise)
b. Handguns are readily available in many countries. (Premise)
c. Senseless killings occur in the U.S. (Conclusion)
d. Handguns inevitably lead to senseless killings. (Premise)
e. The ownership of handguns is not protected by the Constitution. (Conclusion)

ANS: C PTS: 2

Sorites 1F
Given the following sorites:

Some Q are K.
All E are L.
No K are B.
<u>All L are B.</u>
Some Q are not E.

36. For Sorites 1F, the correct standard form is:
a. All L are B.
All E are L.
Some Q are not E.
<u>Some Q are K.</u>
No K are B.
b. Some Q are K.
No K are B.
All E are L.
<u>All L are B.</u>
Some Q are not E.
c. No K are B.
All L are B.
All E are L.
<u>Some Q are not E.</u>
Some Q are K.
d. All E are L.
All L are B.
No K are B.
<u>Some Q are K.</u>
Some Q are not E.
e. All L are B.
No K are B.

Some Q are K.
All E are L.
Some Q are not E.

ANS: D PTS: 2

37. For Sorites 1F, the first intermediate conclusion is:
    a. All E are B.
    b. All L are B.
    c. All B are E.
    d. No K are L.
    e. Some Q are not B.

    ANS: A PTS: 2

38. For Sorites 1F, the second intermediate conclusion is:
    a. Some Q are not B.
    b. Some Q are not L.
    c. No K are E.
    d. All E are B.
    e. No B are E.

    ANS: C PTS: 2

39. For Sorites 1F, the correct answer is:
    a. Strong.
    b. Cogent.
    c. Sound.
    d. Unsound.
    e. Valid.

    ANS: E PTS: 2

40. Given the following sorites:

    All N are P.
    Some N are F.
    All F are R.
    All R are A.
    Some A are not P.

    This sorites is:
    a. Invalid because one of the middle terms is undistributed.
    b. Invalid because it has affirmative premises and a negative conclusion.
    c. Invalid because it has three universal premises and a particular conclusion.
    d. Valid because a particular premise requires a particular conclusion.
    e. Valid because no rules are broken.

    ANS: B PTS: 2

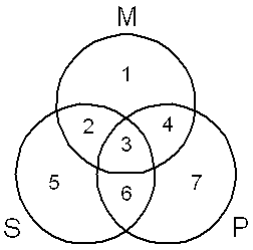
Chapter 5 Test G

MULTIPLE CHOICE

Syllogistic Form 1G
Given the following syllogistic form:

All M are P.
Some S are M.
Some S are not P.

1. For Syllogistic Form 1G, after filling in the Venn diagram,



   a. Areas 1 and 2 are shaded, and there is an X on the line between areas 3 and 6.
   b. Areas 1 and 2 are shaded, and there is an X in area 3.
   c. Areas 1 and 4 are shaded, and there is an X in area 3.
   d. Areas 1 and 2 are shaded, and there is an X on the line between areas 3 and 4.
   e. Area 1 is shaded, and there is an X on the line between areas 2 and 3.

   ANS: B PTS: 2

2. For Syllogistic Form 1G, the correct mood and figure is:
   a. **AIO**-1
   b. **EIO**-1
   c. **AIO**-4
   d. **IAO**-3
   e. **OIA**-4

   ANS: A PTS: 2

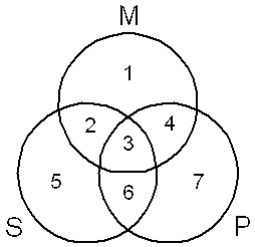
3. For Syllogistic Form 1G, the answer from the Boolean standpoint is:
   a. Invalid, drawing an affirmative conclusion from a negative premise.
   b. Invalid, exclusive premises.
   c. Invalid, illicit major.
   d. Valid, no fallacy.
   e. Invalid, undistributed middle.

   ANS: C PTS: 2

Syllogistic Form 2G
Given the following syllogistic form:

No P are M.
All S are M.
No S are P.

4. For Syllogistic Form 2G, after filling in the Venn diagram,



   a. Areas 5 and 6 are shaded, and there is an X on the line between areas 3 and 4.
   b. Areas 6 and 7 are shaded, and there is an X in area 5.
   c. Areas 3, 4, and 5 only are shaded.
   d. Areas 4, 5, and 6 only are shaded.
   e. Areas 3, 4, 5, and 6 are shaded.

   ANS: E PTS: 2

5. For Syllogistic Form 2G, the correct mood and figure is:
   a. **AAA**-1
   b. **EAE**-3
   c. **IAI**-3
   d. **EAE**-2
   e. **AEA**-2

   ANS: D PTS: 2

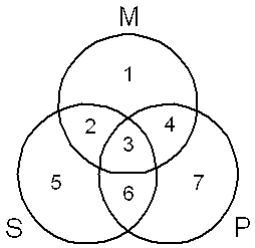
6. For Syllogistic Form 2G, the answer from the Boolean standpoint is:
   a. Invalid, existential fallacy.
   b. Invalid, drawing a negative conclusion from affirmative premises.
   c. Valid, no fallacy.
   d. Invalid, illicit major.
   e. Invalid, exclusive premises.

   ANS: C PTS: 2

   Syllogistic Form 3G
   Given the following syllogistic form:

   Some P are M.
   All S are M.
   Some S are P.

7. For Syllogistic Form 3G, after filling in the Venn diagram,



a. Areas 5 and 6 are shaded, there is an X on the line between areas 3 and 4.
b. Areas 5 and 6 are shaded, and there is an X in area 4.
c. Areas 6 and 7 are shaded, and there is an X in area 3.
d. Areas 5 and 6 are shaded, and there is an X on the line between areas 2 and 3.
e. Areas 2 and 5 are shaded, and there is an X on the line between areas 3 and 4.

ANS: A PTS: 2

8. For Syllogistic Form 3G, the correct mood and figure is:
a. **IAI**-3
b. **IAI**-2
c. **AEA**-4
d. **EIE**-2
e. **IEI**-2

ANS: B PTS: 2

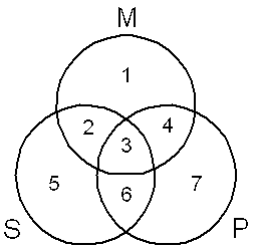
9. For Syllogistic Form 3G, the answer from the Boolean standpoint is:
a. Invalid, existential fallacy.
b. Invalid, illicit major.
c. Invalid, undistributed middle.
d. Valid, no fallacy.
e. Invalid, illicit minor.

ANS: C PTS: 2

Syllogistic Form 4G
Given the following syllogistic form:

No M are P.
All M are S.
Some S are not P.

10. For Syllogistic Form 4G, after filling in the Venn diagram,



a. Areas 2, 3, and 4 are shaded, and there is an X in area 1.
b. Areas 2, 3, 6, and 7 are shaded, and there is an X in area 5.
c. Areas 1 and 4 are shaded, and there is an X on the line between areas 2 and 5.
d. Areas 1, 3, and 4 are shaded, and there is an X on the line between areas 2 and 5.
e. Areas 1, 3, and 4 are shaded.

ANS: E PTS: 2

11. For Syllogistic Form 4G, the correct mood and figure is:
a. **EAO**-1
b. **EAO**-2
c. **AEO**-2

d. **EAO**-3
e. **OAE**-4

ANS: D PTS: 2

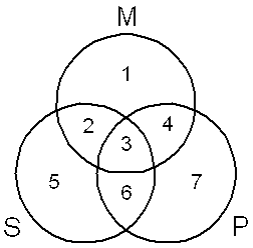
12. For Syllogistic Form 4G, the answer from the Boolean standpoint is:
    a. Invalid, drawing a negative conclusion from affirmative premises.
    b. Invalid, existential fallacy.
    c. Valid, no fallacy.
    d. Invalid, illicit minor.
    e. Invalid, exclusive premises.

    ANS: B PTS: 2

Syllogistic Form 5G
Given the following syllogistic form:

Some P are M.
No M are S.
Some S are P.

13. For Syllogistic Form 5G, after filling in the Venn diagram,



    a. Areas 2 and 3 are shaded, and there is an X in area 4.
    b. Areas 2 and 3 are shaded, and there is an X on the line between areas 1 and 4.
    c. Areas 3 and 4 are shaded, and there is an X in area 2.
    d. Areas 1 and 4 are shaded, and there is an X in area 3.
    e. Areas 2 and 3 are shaded, and there is an X on the line between areas 4 and 7.

    ANS: A PTS: 2

14. For Syllogistic Form 5G, the correct mood and figure is:
    a. **IEI**-3
    b. **EIE**-4
    c. **IEI**-1
    d. **EIE**-1
    e. **IEI**-4

    ANS: E PTS: 2

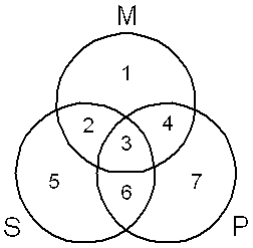
15. For Syllogistic Form 5G, the answer from the Boolean standpoint is:
    a. Invalid, existential fallacy.
    b. Invalid, illicit major.
    c. Invalid, drawing an affirmative conclusion from a negative premise.
    d. Invalid, undistributed middle.
    e. Valid, no fallacy.

ANS: C PTS: 2

Syllogistic Form 6G
Given the following syllogistic form:

No M are P.
Some S are not M.
Some S are not P.

16. For Syllogistic Form 6G, after filling in the Venn diagram,



a. Areas 3 and 4 are shaded, and there is an X on the line between areas 5 and 6.
b. Areas 2 and 3 are shaded, and there is an X in area 6.
c. Areas 3 and 4 are shaded, and there is an X on the line between areas 2 and 5.
d. Areas 3 and 4 are shaded, and there is an X in area 6.
e. Areas 3 and 4 are shaded, and there is an X on the line between areas 6 and 7.

ANS: A PTS: 2

17. For Syllogistic Form 6G, the correct mood and figure is:
a. **EII**-1
b. **EOO**-1
c. **EOO**-4
d. **OOE**-4
e. **AOO**-1

ANS: B PTS: 2

18. For Syllogistic Form 6G, the answer from the Boolean standpoint is:
a. Invalid, existential fallacy.
b. Invalid, illicit minor.
c. Invalid, undistributed middle.
d. Valid, no fallacy.
e. Invalid, exclusive premises.

ANS: E PTS: 2

19. Given the following syllogism:

All flying elephants are pachyderms.
No flying horses are pachyderms.
No flying horses are flying elephants.

This syllogism is:
a. Invalid from both the Boolean and the Aristotelian standpoint.
b. Valid from the Boolean standpoint and invalid from the Aristotelian standpoint.

c. Valid from both the Boolean and the Aristotelian standpoints.
d. Valid from the Aristotelian standpoint on condition pachyderms exist.
e. Valid from the Aristotelian standpoint and invalid from the Boolean standpoint.

ANS: C PTS: 2

Syllogism 1G
Given the following syllogism:
Some bad judges are lawyers, since some lawyers are prejudiced magistrates, and all good judges are unprejudiced magistrates.

20. After reducing the number of terms in Syllogism 1G, the conclusion is:
a. Some L are G.
b. Some G are not L.
c. No G are P.
d. Some L are not G.
e. All G are P.

ANS: D PTS: 2

21. For Syllogism 1G, the major premise is:
a. No G are P.
b. All P are G.
c. Some L are P.
d. Some L are not G.
e. Some P are not L.

ANS: A PTS: 2

22. For Syllogism 1G, the minor premise is:
a. No G are P.
b. Some L are P.
c. Some L are not P.
d. Some L are not G.
e. Some G are L.

ANS: B PTS: 2

Syllogism 2G
Given the following syllogism:
All caffeinated beverages are nonalcoholic drinks, so some alcoholic drinks are not drinks with fizz, since some drinks without fizz are not decaffeinated beverages.

23. After reducing the number of terms in Syllogism 2G, the conclusion is:
a. Some C are not F.
b. Some F are not C.
c. No C are A.
d. Some F are not A.
e. Some A are not F.

ANS: E PTS: 2

24. For Syllogism 2G, the major premise is:
a. Some A are not F.
b. No C are A.

c. Some C are not F.
d. All C are A.
e. Some F are not C.

ANS: C PTS: 2

25. For Syllogism 2G, the minor premise is:
a. No C are A.
b. Some A are not F.
c. All A are C.
d. Some C are not F.
e. Some F are not C.

ANS: A PTS: 2

Syllogism 3G
Given the following syllogism:
Your diamond is valuable, because diamonds are valuable unless they are flawed, and your diamond is not flawed.

26. After translating Syllogism 3G into standard form, the major premise is:
a. Some valuable stones are unflawed diamonds.
b. Some of your diamonds are valuable.
c. All unflawed diamonds are valuable stones.
d. No things identical to your diamond are flawed diamonds.
e. All things identical to your diamond are valuable stones.

ANS: C PTS: 2

27. For Syllogism 3G, the minor premise is:
a. All things identical to your diamond are valuable stones.
b. All unflawed diamonds are things identical to your diamond.
c. All unflawed diamonds are valuable stones.
d. All things identical to your diamond are unflawed diamonds.
e. Some things identical to your diamond are unflawed diamonds.

ANS: D PTS: 2

28. For Syllogism 3G, the conclusion is:
a. No things identical to your diamond are flawed diamonds.
b. All unflawed diamonds are valuable stones.
c. Some of your diamonds are valuable stones.
d. Some valuable stones are unflawed diamonds.
e. All things identical to your diamond are valuable stones.

ANS: E PTS: 2

Syllogism 4G
Given the following syllogism:
Only registered voters are called for jury duty, so Joann must not be a registered voter, since she was not called for jury duty.

29. After translating Syllogism 4G into standard form, the major premise is:
a. No persons identical to Joann are persons called for jury duty.
b. All persons called for jury duty are registered voters.

c. No registered voters are persons called for jury duty.
d. All registered voters are persons called for jury duty.
e. All persons identical to Joann are unregistered voters.

ANS: B PTS: 2

30. For Syllogism 4G, the minor premise is:
a. All registered voters are persons called for jury duty.
b. All persons identical to Joann are not registered voters.
c. No persons identical to Joann are persons called for jury duty.
d. No persons identical to Joann are registered voters.
e. All persons called for jury duty are registered voters.

ANS: C PTS: 2

31. For Syllogism 4G, the conclusion is:
a. No persons identical to Joann are registered voters.
b. All persons identical to Joann are persons not called for jury duty.
c. All registered voters are persons called for jury duty.
d. No unregistered voters are persons called for jury duty.
e. All persons identical to Joann are not registered voters.

ANS: A PTS: 2

32. Given the following enthymeme:
Harold must be guilty. After all, he was arrested.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Harold was convicted. (Premise)
b. Everyone who was arrested is guilty. (Premise)
c. Everyone who is guilty was arrested. (Premise)
d. Some guilty people were arrested. (Conclusion)
e. A few people who were arrested are guilty. (Conclusion)

ANS: B PTS: 2

33. Given the following enthymeme:
Wherever freedom of expression exists, there is pornography, and freedom of expression exists in the United States.

The statement needed to convert the enthymeme into a valid syllogism is:
a. There is no pornography in the United States. (Conclusion)
b. All places identical to the United States are places there is pornography. (Premise)
c. Freedom of expression requires pornography. (Premise)
d. There is pornography in the United States. (Conclusion)
e. Pornography requires freedom of expression. (Conclusion)

ANS: D PTS: 2

34. Given the following enthymeme:
Only domestic corporations are sensitive to workers' needs, and Hitachi is not domestic.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Hitachi is sensitive to workers' needs. (Conclusion)
b. Hitachi is a corporation. (Premise)

c. Hitachi is not sensitive to workers' needs. (Conclusion)
d. All domestic corporations are responsible organizations. (Premise)
e. Foreign corporations do not care about the needs of domestic workers. (Premise)

ANS: C PTS: 2

35. Given the following enthymeme:
Sam wants a dog that is good with children, so he doesn't want a pit bull.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Pit bulls sometimes bite children. (Premise)
b. No sane person should own a pit bull. (Conclusion)
c. Sam likes pit bulls. (Premise)
d. No dogs that are good with children are pit bulls. (Conclusion)
e. Pit bulls are not good with children. (Premise)

ANS: E PTS: 2

Sorites 1G
Given the following sorites:

All D are A.
No B are C.
Some E are D.
All A are B.
Some E are not C.

36. For Sorites 1G, the correct standard form is:
a. Some E are D.
All D are A.
No B are C.
All A are B.
Some E are not C.
b. All A are B.
All D are A.
No B are C.
Some E are D.
Some E are not C.
c. No B are C.
All A are B.
All D are A.
Some E are D.
Some E are not C.
d. All A are B.
No B are C.
Some E are not C.
Some E are D.
All D are A.
e. No B are C.
All D are A.
All A are B.
Some E are D.
Some E are not C.

ANS: C PTS: 2

37. For Sorites 1G, the first intermediate conclusion is:
    a. Some A are E.
    b. All D are B.
    c. Some D are not C.
    d. All A are C.
    e. No A are C.

    ANS: E PTS: 2

38. For Sorites 1G, the second intermediate conclusion is:
    a. Some D are not E.
    b. No C are D.
    c. All D are C.
    d. Some E are A.
    e. No A are C.

    ANS: B PTS: 2

39. For Sorites 1G, the correct answer is:
    a. Cogent.
    b. Sound.
    c. Invalid.
    d. Valid.
    e. Uncogent.

    ANS: D PTS: 2

40. Given the following sorites:

    Some K are not G.
    All N are G.
    All F are N.
    All T are F.
    Some T are K.

    This sorites is:
    a. Invalid because a negative premise requires a negative conclusion.
    b. Is invalid because one of the middle terms is undistributed.
    c. Is invalid because a universal premise requires a universal conclusion.
    d. Is valid because a particular premise requires a particular conclusion.
    e. Is valid because no rules are broken.

    ANS: A PTS: 2

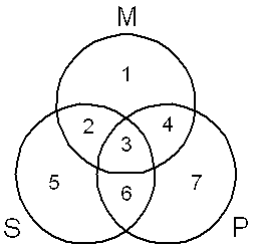
Chapter 5 Test H

MULTIPLE CHOICE

Syllogistic Form 1H
Given the following syllogistic form:

No M are P.
Some M are not S.
Some S are not P.

1. For Syllogistic Form 1H, after filling in the Venn diagram,



   a. Areas 1 and 2 are shaded and there is an X in area 4.
   b. Areas 3 and 4 are shaded and there is an X on the line between areas 1 and 2.
   c. Areas 3 and 4 are shaded and there is an X in area 1.
   d. Areas 2 and 3 are shaded and there is an X on the line between areas 1 and 4.
   e. Areas 6 and 7 are shaded and there is an X on the line between areas 1 and 4.

   ANS: C PTS: 2

2. For Syllogistic Form 1H, the mood and figure is:
   a. **EOO**-3
   b. **EOO**-2
   c. **AOO**-3
   d. **AII**-4
   e. **IOO**-1

   ANS: A PTS: 2

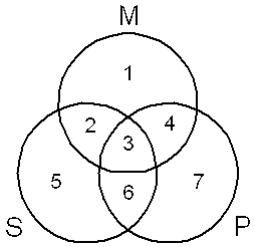
3. For Syllogistic Form 1H, the answer from the Boolean standpoint is:
   a. Invalid, illicit minor.
   b. Invalid, illicit major.
   c. Invalid, existential fallacy.
   d. Invalid, exclusive premises.
   e. Valid, no fallacy.

   ANS: D PTS: 2

Syllogistic Form 2H
Given the following syllogistic form:

No P are M.
All S are M.
Some S are not P.

4. For Syllogistic Form 2H, after filling in the Venn diagram,



   a. Areas 5, 6, and 7 are shaded.
   b. Areas 1, 2, 5, and 6 are shaded.
   c. Areas 2, 3, and 4 are shaded.
   d. Areas 3 and 4 are shaded, and there is an X in area 2.
   e. Areas 3, 4, 5, and 6 are shaded.

   ANS: E PTS: 2

5. For Syllogistic Form 2H, the mood and figure is:
   a. **EAI**-3
   b. **AEO**-2
   c. **IAO**-2
   d. **AEO**-3
   e. **EAO**-2

   ANS: E PTS: 2

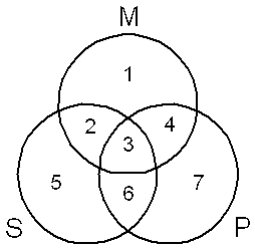
6. For Syllogistic Form 2H, the answer from the Boolean standpoint is:
   a. Invalid, drawing a negative conclusion from a negative premise.
   b. Invalid, existential fallacy.
   c. Invalid, illicit major.
   d. Invalid, exclusive premises.
   e. Valid, no fallacy.

   ANS: B PTS: 2

   Syllogistic Form 3H
   Given the following syllogistic form:

   Some P are not M.
   Some M are S.
   Some S are not P.

7. For Syllogistic Form 3H, after filling in the Venn diagram,



a. There is an X on the line between areas 2 and 5 and between areas 1 and 4.
b. There is an X in areas 2 and in area 7.
c. There is an X on the line between areas 2 and 3 and between areas 6 and 7.
d. There is an X on the line between areas 1 and 2 and between areas 5 and 6.
e. There is an X on the line between areas 3 and 4 and in area 3.

ANS: C PTS: 2

8. For Syllogistic Form 3H, the mood and figure is:
a. **EAE**-3
b. **IOI**-4
c. **OAO**-1
d. **OIO**-4
e. **AIA**-4

ANS: D PTS: 2

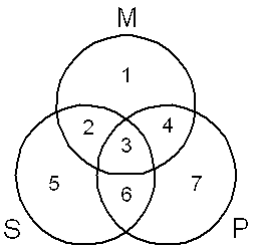
9. For Syllogistic Form 3H, the answer from the Boolean standpoint is:
a. Invalid, illicit major.
b. Invalid, drawing a negative conclusion from an affirmative premise.
c. Invalid, illicit minor.
d. Invalid, exclusive premises.
e. Invalid, undistributed middle.

ANS: A PTS: 2

Syllogistic Form 4H
Given the following syllogistic form:

Some M are not P.
All M are S.
Some S are not P.

10. For Syllogistic Form 4H, after filling in the Venn diagram,



a. Areas 1, 2, and 4 are shaded, and there is an X in area 3.
b. Areas 5 and 6 are shaded, and there is an X on the line between areas 2 and 3.
c. Areas 1 and 4 are shaded, and there is an X in area 2.
d. Areas 1 and 4 are shaded, and there is an X in area 3.
e. Areas 6 and 7 are shaded, and there is an X on the line between areas 2 and 3.

ANS: C PTS: 2

11. For Syllogistic Form 4H, the mood and figure is:
a. **EAE**-2
b. **OAO**-3
c. **OAO**-4

d. **IAI**-3
e. **OEO**-4

ANS: B PTS: 2

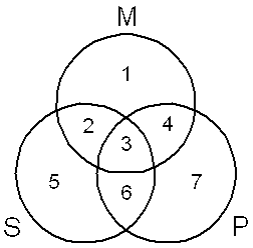
12. For Syllogistic Form 4H, the answer from the Boolean standpoint is:
    a. Valid, no fallacy.
    b. Invalid, drawing a negative conclusion from a negative premise.
    c. Invalid, exclusive premises.
    d. Invalid, illicit major.
    e. Invalid, existential fallacy.

    ANS: A PTS: 2

Syllogistic Form 5H
Given the following syllogistic form:

All P are M.
All S are M.
All S are P.

13. For Syllogistic Form 5H, after filling in the Venn diagram,



    a. Areas 1, 5, and 7 are shaded.
    b. Areas 2, 3, and 4 are shaded.
    c. Areas 5, 6, and 7 are shaded.
    d. There is an X on the line between areas 2 and 3 and between areas 3 and 4.
    e. All areas except area 3 are shaded.

    ANS: C PTS: 2

14. For Syllogistic Form 5H, the mood and figure is:
    a. **EEE**-3
    b. **AAA**-2
    c. **III**-4
    d. **OOO**-2
    e. **AAA**-3

    ANS: B PTS: 2

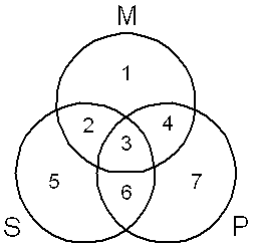
15. For Syllogistic Form 5H, the answer from the Boolean standpoint is:
    a. Valid, no fallacy.
    b. Invalid, illicit minor.
    c. Invalid, exclusive premises.
    d. Invalid, undistributed middle.
    e. Invalid, drawing an affirmative conclusion from universal premises.

ANS: D PTS: 2

Syllogistic Form 6H
Given the following syllogistic form:

All M are P.
No S are M.
All S are P.

16. For Syllogistic Form 6H, after filling in the Venn diagram,



a. Areas 2 and 3 are shaded, and there is an X in area 4.
b. Areas 1, 2, 5, and 6 are shaded.
c. Areas 3, 4, 5, and 6 are shaded.
d. Areas 1, 2, and 3 are shaded.
e. Areas 5 and 6 are shaded, and there is an X on the line between areas 3 and 4.

ANS: D PTS: 2

17. For Syllogistic Form 6H, the mood and figure is:
a. **EAE**-4
b. **EAE**-1
c. **AEA**-1
d. **AIA**-1
e. **EIE**-4

ANS: C PTS: 2

18. For Syllogistic Form 6H, the answer from the Boolean standpoint is:
a. Invalid, drawing an affirmative conclusion from a negative premise.
b. Invalid, illicit minor.
c. Invalid, existential fallacy.
d. Invalid, exclusive premises.
e. Invalid, drawing a negative conclusion from affirmative premises.

ANS: A PTS: 2

19. Given the following syllogism:

No tigers are bears.
All unicorns are bears.
Some unicorns are not tigers.

This syllogism commits the existential fallacy from:
a. The Aristotelian standpoint but not from the Boolean standpoint.
b. Both the Boolean and the Aristotelian standpoints.

c. The Boolean standpoint but not from the Aristotelian standpoint.
d. Neither the Boolean nor the Aristotelian standpoint.
e. The syllogistic standpoint.

ANS: B PTS: 2

20. Given the following syllogistic form:

All M are P.
All M are S.
Some S are P.

This form is:
a. Conditionally valid from the Aristotelian standpoint.
b. Conditionally valid from the Boolean standpoint.
c. Valid from the Aristotelian standpoint.
d. Valid from the Boolean standpoint.
e. Invalid from the Aristotelian standpoint.

ANS: A PTS: 2

Syllogism 1H
Given the following syllogism:
No unsigned paintings are expensive art works, since no signed paintings are framed prints, and all unframed prints are inexpensive art works.

21. After reducing the number of terms in Syllogism 1H, the conclusion is:
a. All expensive art works are framed prints.
b. All signed paintings are expensive art works.
c. All expensive art works are signed paintings.
d. No signed paintings are framed prints.
e. No unframed prints are expensive art works.

ANS: C PTS: 2

22. For Syllogism 1H, the major premise is:
a. All expensive art works are signed paintings.
b. All signed paintings are unframed prints.
c. All framed prints are expensive art works.
d. No signed paintings are framed prints.
e. All expensive art works are framed prints.

ANS: E PTS: 2

23. For Syllogism 1H, the minor premise is:
a. All signed paintings are unframed prints.
b. No signed paintings are framed prints.
c. All expensive art works are signed paintings.
d. All signed paintings are expensive art works.
e. All expensive art works are framed prints.

ANS: B PTS: 2

Syllogism 2H
Given the following syllogism:

No happy marriages are planned arrangements, so some unplanned arrangements are fulfilling relationships, because some unhappy marriages are not unfulfilling relationships.

24. After reducing the number of terms in Syllogism 2H, the conclusion is:
    a. No happy marriages are planned arrangements.
    b. Some fulfilling relationships are not happy marriages.
    c. Some happy marriages are not fulfilling relationships.
    d. Some planned arrangements are not fulfilling relationships.
    e. Some fulfilling relationships are not planned arrangements.

    ANS: E PTS: 2

25. For Syllogism 2H, the major premise is:
    a. All happy marriages are unplanned arrangements.
    b. Some unhappy marriages are fulfilling relationships.
    c. Some fulfilling relationships are not planned arrangements.
    d. No happy marriages are planned arrangements.
    e. Some happy marriages are fulfilling relationships.

    ANS: D PTS: 2

26. For Syllogism 2H, the minor premise is:
    a. Some happy marriages are fulfilling relationships.
    b. All happy marriages are planned arrangements.
    c. Some fulfilling relationships are not happy marriages.
    d. Some planned arrangements are not fulfilling relationships.
    e. Some fulfilling relationships are not planned arrangements.

    ANS: C PTS: 2

Syllogism 3H

Given the following syllogism:
A few snakes have fangs, so there are snakes that are not friendly, for whatever has fangs is unfriendly.

27. After translating Syllogism 3H into standard form, the conclusion is:
    a. Some snakes are not friendly animals.
    b. No snakes are friendly animals.
    c. Some friendly animals are not snakes.
    d. Some snakes are friendly animals.
    e. No animals with fangs are friendly animals.

    ANS: A PTS: 2

28. For Syllogism 3H, the major premise is:
    a. No snakes with fangs are friendly animals.
    b. All animals with fangs are unfriendly animals.
    c. Some snakes are animals with fangs.
    d. Some snakes are not friendly animals.
    e. No animals with fangs are friendly animals.

    ANS: E PTS: 2

29. For Syllogism 3H, the minor premise is:
    a. All animals with fangs are unfriendly animals.
    b. Some snakes are animals with fangs.

c. No animals with fangs are friendly animals.
d. Some snakes are not friendly animals.
e. Some snakes are not animals with fangs.

ANS: B PTS: 2

Syllogism 4H
Given the following syllogism:
Trudy must read biographies, because Trudy likes biographies and Trudy reads what she likes.

30. After translating Syllogism 4H into standard form, the conclusion is:
a. All persons identical to Trudy are persons who read what they like.
b. All persons identical to Trudy are persons who read biographies.
c. All books Trudy reads are biographies.
d. Some books Trudy reads are biographies.
e. Some books Trudy likes are biographies.

ANS: D PTS: 2

31. For Syllogism 4H, the major premise is:
a. All books Trudy likes are biographies.
b. Some books Trudy likes are biographies.
c. All persons identical to Trudy are persons who like biographies.
d. All persons who read what they like are persons identical to Trudy.
e. Some books Trudy likes are not biographies.

ANS: B PTS: 2

32. For Syllogism 4H, the minor premise is:
a. All persons identical to Trudy are persons who read what they like.
b. Some books Trudy likes are biographies.
c. All books Trudy likes are books Trudy reads.
d. All books Trudy reads are books Trudy likes.
e. All persons identical to Trudy are persons who read biographies.

ANS: C PTS: 2

33. Given the following enthymeme:
Suzanne must be smart. After all, she earns 'A's.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Not all Suzanne's grades are 'A's. (Premise)
b. Suzanne is a smart student. (Conclusion)
c. Every smart student earns 'A's. (Premise)
d. Suzanne will graduate with honors. (Conclusion)
e. Anyone who earns 'A's is smart. (Premise)

ANS: E PTS: 2

34. Given the following enthymeme:
Whenever housing prices rise landlords prosper, and housing prices are rising now.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Landlords are prospering now. (Conclusion)
b. All persons who own houses are landlords. (Premise)

c. Landlords prosper when housing prices rise. (Premise)
d. Housing prices rise when interest rates fall. (Premise)
e. All landlords are persons who own houses. (Conclusion)

ANS: A PTS: 2

35. Given the following enthymeme:
Only dentists are invited, and Dr. Klein is not a dentist.

The statement needed to convert the enthymeme into a valid syllogism is:
a. All dentists are persons invited. (Conclusion)
b. Dr. Klein is not invited. (Conclusion)
c. All persons invited are dentists. (Premise)
d. Dr. Klein is invited. (Conclusion)
e. No persons identical to Dr. Klein are dentists. (Conclusion)

ANS: B PTS: 2

Sorites 1H
Given the following sorites:

All R are F.
Some K are N.
No R are A.
No N are F.
Some A are not K.

36. For Sorites 1H, the correct standard form is:
a. Some A are not K.
Some K are N.
No N are F.
All R are F.
No R are A.
b. Some K are N.
No N are F.
No R are A.
All R are F.
Some A are not K.
c. No N are F.
Some K are N.
All R are F.
No R are A.
Some A are not K.
d. Some K are N.
No N are F.
All R are F.
No R are A.
Some A are not K.
e. Some K are not N.
All N are F.
No R are F.
Some R are not A.
Some A are K.

ANS: D PTS: 2

37. For Sorites 1H, the first intermediate conclusion is:
    a. Some K are F.
    b. No N are R.
    c. Some K are not F.
    d. No A are F.
    e. Some F are not K.

    ANS: C PTS: 2

38. For Sorites 1H, the second intermediate conclusion is:
    a. No A are F.
    b. No F are N.
    c. Some K are R.
    d. Some F are not K.
    e. Some K are not R.

    ANS: E PTS: 2

39. For Sorites 1H, the correct answer is:
    a. Valid.
    b. Invalid.
    c. Sound
    d. Cogent
    e. Uncogent

    ANS: B PTS: 2

40. Given the following sorites:

    Some M are R.
    All R are H.
    All H are D.
    No K are D.
    Some K are not M.

    This sorites is:
    a. Invalid because a term is distributed in the conclusion but not in the premise.
    b. Invalid because a universal premise requires a universal conclusion.
    c. Invalid because a term is distributed in a premise but not in the conclusion.
    d. Valid because a particular premise requires a particular conclusion.
    e. Valid because no rules are broken.

    ANS: A PTS: 2

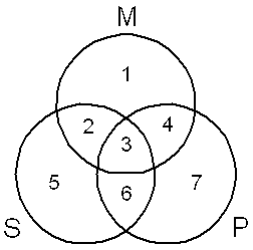
Chapter 5 Test I

MULTIPLE CHOICE

Syllogistic Form 1I
Given the following syllogistic form:

No P are M.
All M are S.
No S are P.

1. For Syllogistic Form 1I, after filling in the Venn diagram,



   a. Areas 1, 4, 6 and 7 are shaded.
   b. Areas 1, 3, and 4 are shaded.
   c. Areas 2, 3, 6, and 7 are shaded.
   d. Areas 3 and 4 are shaded, and there is an X in area 2.
   e. Areas 1, 2, 6, and 7 are shaded.

   ANS: B PTS: 2

2. For Syllogistic Form 1I, the mood and figure is:
   a. **EAE**-4
   b. **AIA**-4
   c. **IAI**-4
   d. **AEA**-1
   e. **EIE**-2

   ANS: A PTS: 2

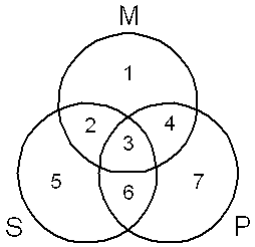
3. For Syllogistic Form 1I, the answer from the Boolean standpoint is:
   a. Invalid, existential fallacy.
   b. Invalid, exclusive premises.
   c. Valid, no fallacy.
   d. Invalid, illicit minor.
   e. Invalid, drawing a negative conclusion from an affirmative premise.

   ANS: D PTS: 2

Syllogistic Form 2I
Given the following syllogistic form:

No P are M.
Some S are M.
Some S are not P.

4. For Syllogistic Form 2I, after filling in the Venn diagram,



   a. Areas 3 and 4 are shaded, and there is an X in area 5.
   b. Areas 6 and 7 are shaded, and there is an X on the line between areas 2 and 3.
   c. Areas 3, 4, 5, and 6 are shaded.
   d. Areas 5 and 6 are shaded, and there is an X on the line between areas 3 and 4.
   e. Areas 3 and 4 are shaded, and there is an X in area 2.

   ANS: E PTS: 2

5. For Syllogistic Form 2I, the mood and figure is:
   a. **IEO**-2
   b. **EAO**-1
   c. **EIO**-2
   d. **AIO**-1
   e. **EIO**-3

   ANS: C PTS: 2

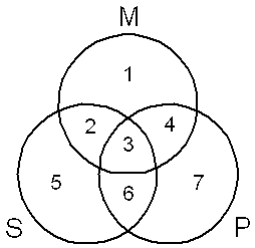
6. For Syllogistic Form 2I, the answer from the Boolean standpoint is:
   a. Invalid, existential fallacy.
   b. Valid, no fallacy.
   c. Invalid, drawing a negative conclusion from a negative premise.
   d. Invalid, illicit minor.
   e. Invalid, undistributed middle.

   ANS: B PTS: 2

   Syllogistic Form 3I
   Given the following syllogistic form:

   Some M are not P.
   No S are M.
   Some S are not P.

7. For Syllogistic Form 3I, after filling in the Venn diagram,



a. Areas 2 and 3 are shaded, and there is an X on the line between areas 1 and 4.
b. Areas 5 and 6 are shaded, and there is an X on the line between areas 1 and 2.
c. Areas 2 and 3 are shaded, and there is an X in area 1.
d. Areas 1 and 2 are shaded, and there is an X in area 3.
e. Areas 2 and 3 are shaded, and there is an X on the line between areas 6 and 7.

ANS: C PTS: 2

8. For Syllogistic Form 3I, the mood and figure is:
a. **EAE**-4
b. **IEI**-1
c. **OEO**-3
d. **OAO**-2
e. **OEO**-1

ANS: E PTS: 2

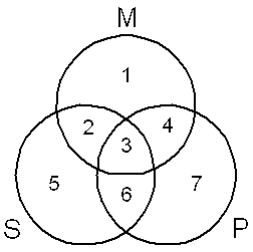
9. For Syllogistic Form 3I, the answer from the Boolean standpoint is:
a. Valid, no fallacy.
b. Invalid, illicit major.
c. Invalid, undistributed middle.
d. Invalid, exclusive premises.
e. Invalid, drawing an affirmative conclusion from negative premises.

ANS: D PTS: 2

Syllogistic Form 4I
Given the following syllogistic form:

All M are P.
Some M are S.
Some S are not P.

10. For Syllogistic Form 4I, after filling in the Venn diagram,



a. Areas 1 and 2 are shaded, and there is an X in area 3.
b. Areas 3 and 4 are shaded, and there is an X in area 2.
c. Areas 1 and 2 are shaded, and there is an X on the line between areas 3 and 4.
d. Areas 6 and 7 are shaded, and there is an X on the line between areas 2 and 3.
e. Areas 1 and 4 are shaded, and there is an X on the line between areas 3 and 4.

ANS: A PTS: 2

11. For Syllogistic Form 4I, the mood and figure is:
a. **IAO**-1
b. **EIO**-1
c. **AOI**-3

d. **AIO**-2
e. **AIO**-3

ANS: E PTS: 2

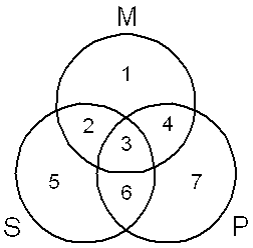
12. For Syllogistic Form 4I, the answer from the Boolean standpoint is:
    a. Invalid, drawing an affirmative conclusion from a negative premise.
    b. Invalid, illicit major.
    c. Valid, no fallacy.
    d. Invalid, existential fallacy.
    e. Invalid, undistributed middle.

    ANS: B PTS: 2

Syllogistic Form 5I
Given the following syllogistic form:

All M are P.
All M are S.
Some S are P.

13. For Syllogistic Form 5I, after filling in the Venn diagram,



    a. There is an X on the line between areas 2 and 3 and between areas 3 and 4.
    b. Areas 1, 2, and 4 are shaded.
    c. Areas 2, 3, and 4 are shaded.
    d. Areas 5, 6, and 7 are shaded.
    e. Areas 1, 2, 5, and 6 are shaded.

    ANS: C PTS: 2

14. For Syllogistic Form 5I, the mood and figure is:
    a. **EEO**-3
    b. **EEI**-2
    c. **AAI**-3
    d. **AAO**-2
    e. **AAI**-2

    ANS: C PTS: 2

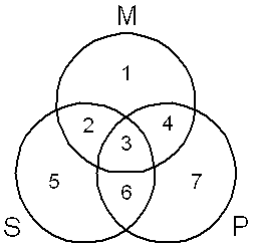
15. For Syllogistic Form 5I, the answer from the Boolean standpoint is:
    a. Invalid, illicit major.
    b. Invalid, exclusive premises.
    c. Invalid, illicit minor.
    d. Invalid, existential fallacy.
    e. Valid, no fallacy.

ANS: D PTS: 2

Syllogistic Form 6I
Given the following syllogistic form:

Some P are M.
Some S are M.
Some S are P.

16. For Syllogistic Form 6I, after filling in the Venn diagram,



a. There is an X on the line between areas 2 and 3 and between areas 3 and 4.
b. There is an X on the line between areas 1 and 2 and between areas 1 and 4.
c. There is an X on the line between areas 2 and 5 and between areas 4 and 7.
d. There is an X in area 2 and in area 4.
e. Areas 2, 3, and 4 are shaded.

ANS: A PTS: 2

17. For Syllogistic Form 6I, the mood and figure is:
a. **OOO**-2
b. **OOO**-3
c. **AAA**-2
d. **EEE**-2
e. **III**-2

ANS: E PTS: 2

18. For Syllogistic Form 6I, the answer from the Boolean standpoint is:
a. Invalid, illicit major.
b. Invalid, undistributed middle.
c. Invalid, exclusive premises.
d. Valid, no fallacy.
e. Invalid, existential fallacy.

ANS: B PTS: 2

19. Given the following syllogism:

All jackals are dogs.
No animals are dogs.
Some animals are not jackals.

This syllogism:
a. Commits the existential fallacy from the Aristotelian standpoint only.
b. Is valid from the Boolean standpoint.

c. Is invalid from both the Boolean and the Aristotelian standpoints.
d. Is valid from the Aristotelian standpoint.
e. Commits the existential fallacy from both standpoints.

ANS: D PTS: 2

20. Given the following syllogism:

No unicorns are lizards.
All unicorns are animals.
Some animals are not lizards.

This syllogism:
a. Is invalid from only the Boolean standpoint.
b. Is invalid from both standpoints.
c. Is invalid from only the Aristotelian standpoint.
d. Is valid from both standpoints.
e. Commits the existential fallacy from only the Boolean standpoint.

ANS: B PTS: 2

Syllogism 1I
Given the following syllogism:
No unpopular monarchs are autocrats with vision, so some autocrats without vision are not insane leaders, for some sane leaders are popular monarchs.

21. After reducing the number of terms in Syllogism 1I, the conclusion is:
a. Some sane leaders are not autocrats with vision.
b. All popular monarchs are autocrats with vision.
c. Some autocrats with vision are not sane leaders.
d. All autocrats with vision are popular monarchs.
e. Some sane leaders are popular monarchs.

ANS: A PTS: 2

22. For Syllogism 1I, the major premise is:
a. No autocrats with vision are unpopular monarchs.
b. Some popular monarchs are not sane leaders.
c. All autocrats with vision are popular monarchs.
d. Some sane leaders are popular monarchs.
e. All popular monarchs are autocrats with vision.

ANS: C PTS: 2

23. For Syllogism 1I, the minor premise is:
a. All autocrats with vision are popular monarchs.
b. Some sane leaders are not popular monarchs.
c. Some sane leaders are not autocrats with vision.
d. Some sane leaders are popular monarchs.
e. Some autocrats with vision are not sane leaders.

ANS: D PTS: 2

Syllogism 2I
Given the following syllogism:

Some factually incorrect accounts are interesting novels, for some inspired stories are factually correct accounts, and all boring novels are uninspired stories.

24. After reducing the number of terms in Syllogism 2I, the conclusion is:
    a. Some interesting novels are not factually correct accounts.
    b. Some inspired stories are not factually correct accounts.
    c. All inspired stories are interesting novels.
    d. Some factually correct accounts are interesting novels.
    e. Some inspired stories are factually correct accounts.

    ANS: A PTS: 2

25. For Syllogism 2I, the major premise is:
    a. No boring novels are inspired stories.
    b. Some inspired stories are factually correct accounts.
    c. Some inspired stories are not factually correct accounts.
    d. All inspired stories are interesting novels.
    e. Some interesting novels are not factually correct accounts.

    ANS: B PTS: 2

26. For Syllogism 2I, the minor premise is:
    a. Some inspired stories are factually correct accounts.
    b. Some interesting novels are factually correct accounts.
    c. Some interesting novels are not factually correct accounts.
    d. No boring novels are inspired stories.
    e. All inspired stories are interesting novels.

    ANS: E PTS: 2

Syllogism 3I
Given the following syllogism:
Taffy must not be a dog because Taffy climbs trees and dogs never climb trees.

27. After translating Syllogism 3I into standard form, the conclusion is:
    a. All animals identical to Taffy are not dogs.
    b. All cats are animals that climb trees.
    c. No animals identical to Taffy are dogs.
    d. All animals identical to Taffy are animals that climb trees.
    e. No dogs are animals that climb trees.

    ANS: C PTS: 2

28. For Syllogism 3I, the major premise is:
    a. All animals identical to Taffy are animals that climb trees.
    b. All animals identical to Taffy are cats.
    c. All dogs are not animals that climb trees.
    d. No dogs are animals that climb trees.
    e. No animals identical to Taffy are dogs.

    ANS: D PTS: 2

29. For Syllogism 3I, the minor premise is:
    a. All animals that climb trees are animals identical to Taffy.
    b. No animals identical to taffy are animals that do not climb trees.

c. No dogs are animals that climb trees.
d. No animals identical to Taffy are dogs.
e. All animals identical to Taffy are animals that climb trees.

ANS: E PTS: 2

Syllogism 4I
Given the following syllogism:
Games are not fun unless they are challenging, so chess is fun, because chess is challenging.

30. After translating Syllogism 4I into standard form, the conclusion is:
a. All challenging games are fun games.
b. All games identical to chess are fun games.
c. All fun games are games identical to chess.
d. All fun games are challenging games.
e. All games identical to chess are challenging games.

ANS: B PTS: 2

31. For Syllogism 4I, the major premise is:
a. All fun games are challenging games.
b. All games identical to chess are challenging games.
c. All challenging games are fun games.
d. All games identical to chess are fun games.
e. All games that are not fun are challenging games.

ANS: A PTS: 2

32. For Syllogism 4I, the conclusion is:
a. All games identical to chess are fun games.
b. All games identical to chess are challenging games.
c. No unchallenging games are games identical to chess.
d. All challenging games are games identical to chess.
e. All fun games are challenging games.

ANS: B PTS: 2

33. Given the following enthymeme:
Cathy is never happy when it rains, so Cathy must not be happy now.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Whenever Cathy is unhappy it rains. (Premise)
b. Whenever it rains it is not sunny. (Conclusion)
c. It is raining now. (Premise)
d. It is not sunny now. (Premise)
e. Cathy is always happy when it's sunny. (Conclusion)

ANS: C PTS: 2

34. Given the following enthymeme:
Anyone who smokes is asking for trouble, and Fred smokes two packs per day.

The statement needed to convert the enthymeme into a valid syllogism is:
a. Fred should quit smoking. (Conclusion)
b. Anyone who smokes two packs per day is asking for trouble. (Premise)

c. Fred may get cancer. (Conclusion)
d. All persons identical to Fred are persons who smoke excessively. (Premise)
e. Fred is asking for trouble. (Conclusion)

ANS: E PTS: 2

35. Given the following enthymeme:
The office is closed today, because today is Sunday.

The statement needed to convert the enthymeme into a valid syllogism is:
a. The only day the office is closed is Sunday. (Premise)
b. All days identical to today are days the office is closed. (Premise)
c. The office will be open on Monday. (Conclusion)
d. The office is closed on Sunday. (Premise)
e. Most offices are closed on Sunday. (Conclusion)

ANS: D PTS: 2

Sorites 1I
Given the following sorites:

Some M are H.
All G are Q.
All S are G.
No H are Q.
Some M are not S.

36. For Sorites 1I, the correct standard form is:
a. Some M are not S.
All S are G.
All G are Q.
No H are Q.
Some M are H.
b. All G are Q.
No H are Q.
Some M are H.
All S are G.
Some M are not S.
c. No H are Q.
All G are Q.
All S are G.
Some M are H.
Some M are not S.
d. No S are G.
Some G are Q.
All H are Q.
Some M are not H.
Some M are S.
e. All S are G.
All G are Q.
No H are Q.
Some M are H.
Some M are not S.

ANS: E PTS: 2

37. For Sorites 1I, the first intermediate conclusion is:
    a. All S are Q.
    b. Some M are not G.
    c. No G are H.
    d. No S are H.
    e. Some M are not Q.

    ANS: A PTS: 2

38. For Sorites 1I, the second intermediate conclusion is:
    a. No G are H.
    b. Some M are not Q.
    c. No S are H.
    d. All S are Q.
    e. Some H are not G.

    ANS: C PTS: 2

39. For Sorites 1I, the correct answer is:
    a. Unsound.
    b. Valid.
    c. Sound.
    d. Cogent.
    e. Invalid.

    ANS: B PTS: 2

40. Given the following sorites:

    No S are A.
    All N are A.
    All T are N.
    Some R are T.
    Some R are not S.

    This sorites is:
    a. Invalid because only one premise is negative.
    b. Invalid because one of the middle terms is undistributed.
    c. Invalid because a term is distributed in the conclusion but not in the premise.
    d. Valid because no rules are broken.
    e. Valid because a negative premise requires a negative conclusion.

    ANS: D PTS: 2

Chapter 6 Test A

MULTIPLE CHOICE

INSTRUCTIONS: Select the correct translation for each problem.

1. Either Breitling has a diamond model and Rado advertises a calendar watch or Tissot has luminous hands.
   a. $B \vee (R \bullet T)$
   b. $(B \vee R) \bullet T$
   c. $(B \bullet R) \vee T$
   d. $B \bullet R \vee T$
   e. $B \bullet (R \vee T)$

   ANS: C PTS: 2

2. If Movado offers a blue dial, then neither Fossil is water resistant nor Nautica promotes a titanium case.
   a. $M \supset (\sim F \vee \sim N)$
   b. $M \equiv \sim(F \vee N)$
   c. $M \supset (\sim F \bullet \sim N)$
   d. $M \supset \sim(F \vee N)$
   e. $M \supset \sim F \bullet \sim N$

   ANS: D PTS: 2

3. Piaget has a gold watch only if both Seiko has leather bands and Breitling has a diamond model.
   a. $P \supset (S \bullet B)$
   b. $(S \bullet B) \vee P$
   c. $(S \bullet B) \supset P$
   d. $(S \bullet B) \equiv P$
   e. $S \bullet (B \supset P)$

   ANS: A PTS: 2

4. Gucci features stainless steel; also, Fossil is water resistant given that Cartier offers a stop watch.
   a. $G \vee (C \supset F)$
   b. $(G \bullet C) \supset F$
   c. $G \bullet (F \supset C)$
   d. $C \supset (G \bullet F)$
   e. $G \bullet (C \supset F)$

   ANS: E PTS: 2

5. Movado and Nautica offer a black dial if and only if Piaget has a gold watch.
   a. $(M \vee N) \equiv P$
   b. $(M \bullet N) \equiv P$
   c. $(M \bullet N) \supset P$
   d. $P \supset (N \bullet N)$
   e. $(P \supset M) \bullet (P \supset N)$

   ANS: B PTS: 2

6. If Tissot has luminous hands, then if either Rado advertises a calendar model or Fossil is water resistant, then Gucci features stainless steel.
   a. $(R \vee F) \supset (T \supset G)$
   b. $(R \supset T) \supset (F \supset G)$
   c. $[T \supset (R \vee F)] \supset G$
   d. $T \supset [(R \supset G) \vee (F \supset G)]$
   e. $T \supset [(R \vee F) \supset G]$

   ANS: E PTS: 2

7. Cartier's offering a stop watch implies that Seiko has leather bands, provided that both Rado advertises a calendar model and Tissot has luminous hands.
   a. $(R \bullet T) \supset (C \supset S)$
   b. $(R \supset C) \bullet (T \supset S)$
   c. $(C \supset S) \supset (R \bullet T)$
   d. $[R \supset (C \supset S)] \bullet [T \supset (C \supset S)]$
   e. $(R \vee T) \supset (C \supset S)$

   ANS: A PTS: 2

8. Movado's offering an ivory dial is a sufficient condition for Breitling's having a ruby model if Gucci's offering a better warranty is a necessary condition for Fossil's being water resistant.
   a. $(M \supset B) \supset (F \supset G)$
   b. $(B \supset M) \supset (G \supset F)$
   c. $(G \supset F) \supset (B \supset M)$
   d. $(F \supset G) \supset (M \supset B)$
   e. $F \supset [G \supset (M \supset B)]$

   ANS: D PTS: 2

9. Piaget and Nautica do not have a sapphire watch unless Breitling's having a diamond watch is a sufficient and necessary condition for either Cartier's offering multiple dials or Gucci's selling a self-winder.
   a. $\sim(P \bullet N) \vee [(C \vee G) \equiv B]$
   b. $(\sim P \bullet \sim N) \vee [(B \supset C) \bullet (G \supset B)]$
   c. $(\sim P \bullet \sim N) \vee [(B \equiv (C \vee G)]$
   d. $(\sim P \bullet \sim N) \supset [(B \equiv (C \vee G)]$
   e. $[(B \equiv (C \vee G)] \supset (\sim P \bullet \sim N)$

   ANS: C PTS: 2

10. Seiko has a quartz watch if and only if either Movado does not offer a silver dial or Rado does not have a calendar watch; however, Tissot has luminous hands only if both Fossil is water resistant and Rado has a calendar model.
    a. $[S \equiv \sim(M \vee R)] \bullet [T \supset (F \bullet R)]$
    b. $[S \equiv (\sim M \vee \sim R)] \bullet [(F \bullet R) \supset T]$
    c. $[(\sim M \vee \sim R) \supset S] \bullet [T \supset (F \bullet R)]$
    d. $[S \equiv (\sim M \vee \sim R)] \vee [T \supset (F \bullet R)]$
    e. $[S \equiv (\sim M \vee \sim R)] \bullet [T \supset (F \bullet R)]$

    ANS: E PTS: 2

Proposition 1A

Given the following proposition:
$[A \supset \sim(B \bullet Y)] \equiv \sim[B \supset (X \bullet \sim A)]$

11. Given that A and B are true and X and Y are false, determine the truth value of Proposition 1A.
    a. True.
    b. False.

    ANS: A PTS: 2

12. In Proposition 1A, the main operator is a:
    a. Tilde.
    b. Wedge.
    c. Triple bar.
    d. Dot.
    e. Horseshoe.

    ANS: C PTS: 2

Proposition 2A
Given the following proposition:
$[(X \supset A) \bullet (B \supset \sim Y)] \supset [(B \vee Y) \bullet (A \supset X)]$

13. Given that A and B are true and X and Y are false, determine the truth value of Proposition 2A.
    a. True.
    b. False.

    ANS: B PTS: 2

14. In Proposition 2A, the main operator is a:
    a. Wedge.
    b. Tilde.
    c. Dot.
    d. Horseshoe.
    e. Triple bar.

    ANS: D PTS: 2

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 1A
Given the following statement:
$(N \supset K) \equiv (K \supset N)$

15. Statement 1A is:
    a. Contingent.
    b. Inconsistent.
    c. Consistent.
    d. Tautologous.
    e. Self-contradictory.

    ANS: A PTS: 4

16. The truth table for Statement 1A has how many lines?
    a. Six.

b. Four.
c. Two.
d. Eight.
e. Nine.

ANS: B PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 2A
Given the following statement:
$(G \supset \sim Q) \equiv \sim(Q \bullet G)$

17. Statement 2A is:
a. Consistent.
b. Self-contradictory.
c. Tautologous.
d. Contingent.
e. Logically equivalent.

ANS: C PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 3A
Given the following statement:
$[\sim H \vee (E \bullet D)] \equiv [(H \bullet \sim E) \vee (H \bullet \sim D)]$

18. Statement 3A is:
a. Tautologous.
b. Valid.
c. Contingent.
d. Inconsistent.
e. Self-contradictory.

ANS: E PTS: 4

19. The truth table for Statement 3A has how many lines?
a. Four.
b. Eight.
c. Twelve.
d. Six.
e. Nine.

ANS: B PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

20. Given the pair of statements:
$\sim(R \equiv M)$ and $M \bullet \sim R$

These statements are:

a. Inconsistent.
b. Invalid.
c. Logically equivalent.
d. Consistent.
e. Contradictory.

ANS: D PTS: 4

21. Given the pair of statements:
$\sim(S \supset Q)$ and $\sim Q \bullet S$

These statements are:
a. Logically equivalent.
b. Valid.
c. Contradictory.
d. Consistent.
e. Inconsistent.

ANS: A PTS: 4

22. Given the pair of statements:
$C \bullet \sim L$ and $L \bullet \sim C$

These statements are:
a. Consistent.
b. Inconsistent.
c. Contradictory.
d. Logically equivalent.
e. Valid.

ANS: B PTS: 4

23. Given the argument:
$B \vee M \quad / \quad B \vee \sim K \quad // \quad (K \vee \sim M) \supset B$

This argument is:
a. Invalid; fails in 3rd line.
b. Invalid; fails in 2nd line.
c. Invalid; fails in 1st line.
d. Invalid; fails in 4th line.
e. Valid.

ANS: E PTS: 4

24. Given the argument:
$S \equiv (N \vee H) \quad / \quad S \vee \sim N \quad // \quad S \supset H$

This argument is:
a. Invalid; fails in 4th line.
b. Invalid; fails in 2nd line.
c. Invalid; fails in 5th line.
d. Valid.
e. Invalid; fails in 3rd line.

ANS: B PTS: 4

INSTRUCTIONS: Use indirect truth tables to answer the following problems.

25. Given the argument:
$E \supset J \ / \ B \supset Q \ / \ D \supset (J \bullet \sim Q) \ // \ (E \bullet B) \equiv D$

This argument is:
a. Uncogent.
b. Sound.
c. Valid.
d. Invalid.
e. Cogent.

ANS: D PTS: 4

26. Given the argument:
$(K \bullet \sim C) \supset \sim(P \bullet R) \ / \ J \supset (K \bullet P) \ / \ A \supset (P \bullet R) \ // \ (A \bullet J) \supset C$

This argument is:
a. Cogent.
b. Sound.
c. Valid.
d. Uncogent.
e. Invalid.

ANS: C PTS: 4

27. Given the statements:
$S \supset (Q \vee L) \ / \ (Q \vee G) \supset (S \supset N) \ / \ L \supset (N \vee \sim S) \ / \ S \bullet \sim N$

These statements are:
a. Inconsistent.
b. Invalid.
c. Tautologous.
d. Logically equivalent.
e. Consistent.

ANS: A PTS: 4

28. Given the statements:
$R \supset (M \vee \sim C) \ / \ (P \vee U) \supset C \ / \ M \supset \sim P \ / \ R \equiv U$

These statements are:
a. Contradictory.
b. Tautologous.
c. Valid.
d. Inconsistent.
e. Consistent.

ANS: E PTS: 4

INSTRUCTIONS: Determine whether the following symbolized arguments are valid or invalid by identifying the form of each. In some cases the argument must be rewritten using double negation or commutativity before it has a named form. Those arguments without a specific name are invalid.

29. $H \supset \sim M$
M
$\sim H$
a. DA—invalid.
b. MP—valid.
c. AC—invalid.
d. MT—valid.
e. HS—valid.

ANS: D PTS: 2

30. $(\sim G \vee E) \bullet (R \vee M)$
$R \vee \sim G$
$E \vee M$
a. MT—valid.
b. Invalid.
c. DA—invalid.
d. MP—valid.
e. AC—invalid.

ANS: B PTS: 2

31. $(R \supset \sim T) \bullet (D \supset T)$
$\sim T \vee T$
$\sim R \vee \sim D$
a. MT—valid.
b. CD—invalid.
c. CD—valid.
d. HS—valid.
e. DD—valid.

ANS: E PTS: 2

32. $\sim D \supset N$
D
$\sim N$
a. MP—valid.
b. MT—invalid.
c. DA—invalid.
d. AC—invalid.
e. Invalid.

ANS: C PTS: 2

33. $\sim S$
$\sim S \supset F$
F
a. MP—valid.
b. AC—valid.
c. MT—valid.
d. AC—invalid.
e. DS—valid.

ANS: A PTS: 2

34. $S \vee \sim T$
$\underline{S \quad\quad}$
$\sim T$
a. DA—invalid.
b. CD—valid.
c. Invalid.
d. DD—valid.
e. CD—invalid.

ANS: C PTS: 2

35. $\sim J \supset C$
$\underline{C \supset \sim T}$
$\sim J \supset \sim T$
a. DD—valid.
b. MP—valid.
c. CD—valid.
d. Invalid.
e. HS—valid.

ANS: E PTS: 2

36. L
$\underline{\sim N \supset L}$
$\sim N$
a. AC—invalid.
b. DA—invalid.
c. MP—valid.
d. MT—valid.
e. DS—invalid.

ANS: A PTS: 2

37. $G \vee \sim T$
$\underline{(G \supset \sim H) \bullet (\sim T \supset A)}$
$\sim H \vee A$
a. MP—valid.
b. CD—valid.
c. DD—valid.
d. Invalid.
e. DD—invalid.

ANS: B PTS: 2

38. $K \vee \sim B$
$\underline{B \quad\quad}$
K
a. DA—invalid.
b. Invalid.
c. MT—valid.
d. DS—valid.

e. MP—valid.

ANS: D PTS: 2

Chapter 6 Test B

MULTIPLE CHOICE

INSTRUCTIONS: Select the correct translation for each problem.

1. Princess drops its dress codes or Oceania enlarges its fleet, and Seabourn reduces its fares.
   a. $P \bullet (O \vee S)$
   b. $(P \bullet O) \vee S$
   c. $P \vee (O \bullet S)$
   d. $P \vee O \bullet S$
   e. $(P \vee O) \bullet S$

   ANS: E PTS: 2

2. Not either Regent enlarges its casinos or Celebrity revises its itineraries if Holland remodels its staterooms.
   a. $H \supset \sim(R \vee C)$
   b. $H \equiv (\sim R \vee C)$
   c. $\sim(R \vee C) \supset H$
   d. $(\sim R \vee \sim C) \supset H$
   e. $H \supset (\sim R \vee \sim C)$

   ANS: A PTS: 2

3. Norwegian improves its entertainment only if both Disney does not promote family cruises and Windstar does not diversify its activities.
   a. $N \supset (\sim D \vee \sim W)$
   b. $N \supset (\sim D \bullet \sim W)$
   c. $(\sim D \bullet \sim W) \supset N$
   d. $N \supset \sim(D \bullet W)$
   e. $\sim(D \bullet W) \supset N$

   ANS: B PTS: 2

4. Either Azmara or Seabourn do not open new boutiques provided that Princess improves its cuisine.
   a. $P \supset (\sim A \vee \sim S)$
   b. $(\sim A \vee \sim S) \supset P$
   c. $(\sim A \bullet \sim S) \supset P$
   d. $P \supset \sim(A \bullet S)$
   e. $\sim(A \bullet S) \supset P$

   ANS: A PTS: 2

5. Carnival advertises its parties if and only if Disney's promoting family cruises implies that Norwegian improves its entertainment.
   a. $(C \equiv D) \supset N$
   b. $(C \supset D) \bullet (N \supset C)$
   c. $C \equiv (D \supset N)$
   d. $C \supset (D \equiv N)$
   e. $C \equiv (N \supset D)$

ANS: C PTS: 2

6. If Disney promotes family cruises, then if either Holland remodels its staterooms or Regent enlarges its casinos, then Windstar diversifies its activities.
   a. $[D \supset (H \vee R)] \supset W$
   b. $D \supset [(H \supset R) \supset W]$
   c. $[(H \vee R) \supset D] \supset W$
   d. $D \supset [(H \vee R) \supset W]$
   e. $D \supset (H \vee R) \supset W$

   ANS: D PTS: 2

7. Princess and Azmara improve gym facilities only if neither Carnival controls rowdiness nor Seabourn reduces fares.
   a. $(P \vee A) \supset (\sim C \vee S)$
   b. $(P \bullet A) \supset \sim(C \vee S)$
   c. $\sim(C \vee S) \supset (P \bullet A)$
   d. $(P \bullet A) \supset (\sim C \vee \sim S)$
   e. $(\sim C \vee \sim S) \supset (P \bullet A)$

   ANS: B PTS: 2

8. Regent's enlarging its casinos is a necessary condition for Disney's offering games if and only if Windstar's diversifying its activities is a sufficient condition for Costa's enlarging its nightspots.
   a. $(R \supset D) \equiv (C \supset W)$
   b. $(D \supset W) \equiv (R \supset C)$
   c. $(D \supset R) \equiv (W \supset C)$
   d. $(D \supset R) \vee (W \supset C)$
   e. $(R \equiv D) \supset (W \equiv C)$

   ANS: C PTS: 2

9. Azmara's opening new boutiques is a sufficient and necessary condition for both Norwegian's improving entertainment and Holland's remodeling its staterooms if Princess's dropping its dress codes implies that Celebrity revises its itineraries.
   a. $(P \supset C) \supset [(A \supset N) \bullet (A \supset C)]$
   b. $(P \equiv C) \supset [A \supset (N \bullet H)]$
   c. $[A \equiv (N \bullet H)] \supset (P \supset C)$
   d. $[(A \supset N) \bullet (A \supset C)] \supset (P \supset C)$
   e. $(P \supset C) \supset [A \equiv (N \bullet H)]$

   ANS: E PTS: 2

10. Seabourn revises its menu given that Norwegian and Princess halt tipping, unless Oceania enlarges its fleet if and only if both Costa improves its gym facilities and Regent enlarges its casinos.
    a. $[S \supset (N \bullet P)] \vee [O \equiv (C \bullet R)]$
    b. $[(N \bullet P) \equiv S] \vee [O \supset (C \bullet R)]$
    c. $[(N \bullet P) \supset S] \vee [O \equiv (C \bullet R)]$
    d. $[S \supset (N \bullet P)] \supset [O \equiv (C \bullet R)]$
    e. $[S \supset (N \bullet P)] \equiv [O \vee (C \bullet R)]$

    ANS: C PTS: 2

Proposition 1B

Given the following proposition:
$\sim[(A \vee \sim B) \supset X] \supset [\sim Y \supset (A \bullet X)]$

11. Given that A and B are true and X and Y are false, determine the truth value of Proposition 1B.
    a. True.
    b. False.

    ANS: B PTS: 2

12. In Proposition 1B, the main operator is a:
    a. Dot.
    b. Triple bar.
    c. Wedge.
    d. Tilde.
    e. Horseshoe.

    ANS: E PTS: 2

Proposition 2B
Given the following proposition:
$[(A \supset Y) \equiv (B \supset \sim X)] \vee \sim[(B \bullet \sim X) \equiv (Y \bullet A)]$

13. Given that A and B are true and X and Y are false, determine the truth value of Proposition 2B.
    a. True.
    b. False.

    ANS: A PTS: 2

14. In Proposition 2B, the main operator is a:
    a. Horseshoe.
    b. Dot.
    c. Tilde.
    d. Wedge.
    e. Triple bar.

    ANS: D PTS: 2

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 1B
Given the following statement:
$(R \bullet B) \equiv (B \supset \sim R)$

15. Statement 1B is:
    a. Logically equivalent.
    b. Tautologous.
    c. Self-contradictory.
    d. Contingent.
    e. Consistent.

    ANS: C PTS: 4

16. The truth table for Statement 1B has how many lines?
    a. Six.

b. Four.
c. Two.
d. Eight.
e. Nine.

ANS: B PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 2B
Given the following statement:
$[N \equiv (S \bullet J)] \supset [S \supset (N \supset J)]$

17. Statement 2B is:
a. Inconsistent.
b. Contingent.
c. Consistent.
d. Self-contradictory.
e. Tautologous.

ANS: E PTS: 4

18. The truth table for Statement 2B has how many lines?
a. Nine.
b. Twelve.
c. Four.
d. Eight.
e. Six.

ANS: D PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

19. Given the statement:
$(F \vee \sim S) \supset \sim(S \vee \sim F)$

This statement is:
a. Contingent.
b. Self-contradictory.
c. Inconsistent.
d. Valid.
e. Tautologous.

ANS: A PTS: 4

20. Given the pair of statements:
$G \vee \sim H$ and $H \vee \sim G$

These statements are:
a. Invalid.
b. Consistent.
c. Logically equivalent.
d. Contradictory.

e. Inconsistent.

ANS: B PTS: 4

21. Given the pair of statements:
$J \equiv \sim M$ and $(J \bullet M) \vee \sim(M \vee J)$

These statements are:
a. Valid.
b. Consistent.
c. Contradictory.
d. Logically equivalent.
e. Inconsistent.

ANS: C PTS: 4

22. Given the pair of statements:
$D \bullet \sim R$ and $R \bullet \sim D$

These statements are:
a. Logically equivalent.
b. Consistent.
c. Contradictory.
d. Valid.
e. Inconsistent.

ANS: E PTS: 4

23. Given the argument:
$K \supset (M \vee \sim H)$ / $M \supset H$ / $M \supset K$ // $K \supset H$

This argument is:
a. Invalid; fails in 1st line.
b. Invalid; fails in 2nd line.
c. Valid.
d. Invalid; fails in 4th line.
e. Invalid; fails in 3rd line.

ANS: D PTS: 4

24. Given the argument:
$R \vee I$ / $\sim S \vee (R \supset I)$ // $S \supset I$

This argument is:
a. Valid.
b. Invalid; fails in 4th line.
c. Invalid; fails in 2nd line.
d. Invalid; fails in 5th line.
e. Invalid; fails in 3rd line.

ANS: A PTS: 4

INSTRUCTIONS: Use indirect truth tables to answer the following problems.

25. Given the argument:

$Q \vee \sim S$ / $\sim(N \bullet A)$ / $S \vee A$ / $(P \bullet N) \vee (G \bullet Q)$ // $P \bullet G$

This argument is:
a. Valid.
b. Uncogent.
c. Invalid.
d. Cogent.
e. Sound.

ANS: C PTS: 4

26. Given the argument:
$J \supset C$ / $R \vee I$ / $I \supset (U \bullet \sim J)$ / $(R \vee U) \supset (C \bullet J)$ // C

This argument is:
a. Sound.
b. Uncogent.
c. Invalid.
d. Cogent.
e. Valid.

ANS: E PTS: 4

27. Given the statements:
$Q \supset (N \vee S)$ / $N \supset (L \supset B)$ / $(S \vee E) \supset (Q \supset B)$ / $Q \equiv \sim B$

These statements are:
a. Inconsistent.
b. Consistent.
c. Invalid.
d. Tautologous.
e. Logically equivalent.

ANS: B PTS: 4

28. Given the statements:
$P \supset (A \supset M)$ / $(D \vee K) \supset (M \supset H)$ / $(A \bullet \sim H) \vee \sim D$ / $P \bullet D$

These statements are:
a. Contradictory.
b. Tautologous.
c. Valid.
d. Inconsistent.
e. Consistent.

ANS: D PTS: 4

INSTRUCTIONS: Determine whether the following symbolized arguments are valid or invalid by identifying the form of each. In some cases the argument must be rewritten using double negation or commutativity before it has a named form. Those arguments without a specific name are invalid.

29. $\sim D \supset \sim C$
$\underline{R \supset \sim D}$
$R \supset \sim C$

a. MP—valid.
b. DS—valid.
c. Invalid.
d. CD—valid.
e. HS—valid.

ANS: E PTS: 2

30. $(\sim C \supset \sim J) \bullet (P \supset L)$
$J \vee \sim L$
$C \vee \sim P$
a. CD—valid.
b. Invalid.
c. DD—valid.
d. MT—valid.
e. CD—invalid.

ANS: C PTS: 2

31. $\sim M$
$M \supset \sim G$
G
a. AC—invalid.
b. MT—valid.
c. DS—invalid.
d. DA—invalid.
e. MP—valid.

ANS: D PTS: 2

32. $\sim N \vee A$
N
A
a. DS—valid.
b. HS—valid.
c. MT—valid.
d. DA—invalid.
e. MP—valid.

ANS: A PTS: 2

33. $D \vee \sim E$
$\sim E$
D
a. AC—invalid.
b. DS—invalid.
c. Invalid.
d. MP—valid.
e. HS—valid.

ANS: C PTS: 2

34. $\sim K \supset \sim N$

~K
~N

a. HS—valid.
b. MP—valid.
c. MT—valid.
d. DS—valid.
e. AC—invalid.

ANS: B PTS: 2

35. ~Q
H ⊃ ~Q
H

a. MT—invalid.
b. MP—valid.
c. DA—invalid.
d. DS—valid.
e. AC—invalid.

ANS: E PTS: 2

36. E ⊃ ~A
B ⊃ ~E
B ⊃ A

a. Invalid.
b. DD—invalid.
c. HS—valid.
d. CD—valid.
e. DS—valid.

ANS: A PTS: 2

37. (~H ⊃ K) • (H ⊃ ~T)
H ∨ ~H
~T ∨ K

a. Invalid.
b. CD—valid.
c. DD—valid.
d. DA—invalid.
e. MP—valid.

ANS: B PTS: 2

38. ~S ⊃ ~F
F
S

a. MP—valid.
b. DS—invalid.
c. DA—invalid.
d. MT—valid.
e. DS—valid.

ANS: D PTS: 2

Chapter 6 Test C

MULTIPLE CHOICE

INSTRUCTIONS: Select the correct translation for each problem. Use capital letters to represent affirmative English statements.

1. Coors is smooth or both Beck's is subtle and Guinness is heavy.
   a. $C \vee (B \bullet G)$
   b. $C \bullet (B \vee G)$
   c. $(C \vee B) \bullet G$
   d. $(C \bullet B) \vee G$
   e. $C \vee B \bullet G$

   ANS: A PTS: 2

2. Budweiser is bland if either Heineken is balanced or Foster's is refreshing.
   a. $(H \supset B) \vee F$
   b. $(B \supset H) \vee F$
   c. $B \supset (H \vee F)$
   d. $B \supset H \vee F$
   e. $(H \vee F) \supset B$

   ANS: E PTS: 2

3. Alaskan is sweet only if neither Heineken is balanced nor Pabst is clean tasting.
   a. $A \supset (\sim H \vee \sim P)$
   b. $A \supset \sim H \bullet \sim P$
   c. $\sim(H \vee P) \supset A$
   d. $A \supset \sim(H \vee P)$
   e. $(\sim H \vee \sim P) \supset A$

   ANS: D PTS: 2

4. Sierra is hearty given that Michelob's being flavorful implies that Guinness is heavy.
   a. $(S \supset M) \supset G$
   b. $(G \supset M) \supset S$
   c. $S \supset (M \supset G)$
   d. $M \supset (G \supset S)$
   e. $(M \supset G) \supset S$

   ANS: E PTS: 2

5. Harp is soothing if and only if both Miller is not zesty and Coors is not smooth.
   a. $H \equiv \sim(M \bullet C)$
   b. $(H \supset \sim M) \bullet (H \supset \sim C)$
   c. $H \equiv (\sim M \bullet \sim C)$
   d. $(H \equiv \sim M) \bullet (H \equiv \sim C)$
   e. $H \equiv (M \bullet C)$

   ANS: C PTS: 2

6. Sierra is hearty only if Budweiser is bland, given that both Heineken is balanced and Michelob is complex.
   a. $(S \supset B) \supset (H \bullet M)$
   b. $(H \bullet M) \supset (S \supset B)$
   c. $(H \bullet M) \supset (B \supset S)$
   d. $(S \supset B) \supset (H \supset M)$
   e. $(H \supset M) \bullet (S \supset B)$

   ANS: B PTS: 2

7. Corona is drinkable if Pabst is clean tasting, and Foster's is refreshing only if Guinness is dark.
   a. $(P \supset C) \bullet (F \supset G)$
   b. $(C \supset P) \bullet (F \supset G)$
   c. $(C \supset P) \bullet (G \supset F)$
   d. $(P \supset F) \bullet (C \supset G)$
   e. $(P \supset C) \vee (F \supset G)$

   ANS: A PTS: 2

8. Michelob's being complex is a necessary condition for Heineken's being balanced unless Alaskan's being sweet is a sufficient condition for Carlsberg's being malty.
   a. $(M \supset H) \vee (A \supset C)$
   b. $(M \supset H) \supset (A \supset C)$
   c. $(M \supset H) \vee (C \supset A)$
   d. $(H \supset M) \vee (A \supset C)$
   e. $(H \supset M) \supset (A \supset C)$

   ANS: D PTS: 2

9. If Heineken's being balanced implies that either Sierra is hearty or Alaskan is not sweet, then Miller's being zesty is a sufficient and necessary condition for Coors's being smooth.
   a. $[H \supset \sim(S \vee A)] \supset (M \equiv C)$
   b. $[H \supset (S \vee \sim A)] \supset (M \equiv C)$
   c. $[H \equiv (S \vee \sim A)] \supset (M \supset C)$
   d. $H \supset [(S \vee \sim A) \equiv (M \supset C)]$
   e. $H \supset [(S \vee \sim A) \supset (M \equiv C)]$

   ANS: B PTS: 2

10. Sierra's being hearty is a necessary condition for both Coors's being smooth and Harp's being crisp; moreover, Guinness is dark if and only if Alaskan's being sweet implies that Beck's is subtle.
    a. $[S \supset (C \bullet H)] \bullet [G \equiv (B \supset A)]$
    b. $[S \supset (C \bullet H)] \bullet [G \equiv (A \supset B)]$
    c. $[(C \bullet H) \supset S] \bullet [G \equiv (A \supset B)]$
    d. $[(C \bullet H) \supset S] \vee [G \equiv (A \supset B)]$
    e. $[(C \bullet H) \supset S] \bullet [G \supset (A \supset B)]$

    ANS: C PTS: 2

Proposition 1C
Given the following proposition:
$\sim\{[(B \equiv \sim X) \supset Y] \vee [\sim X \supset (A \supset Y)]\}$

11. Given that A and B are true and X and Y are false, determine the truth value of Proposition 1C.

a. True.
b. False.

ANS: A PTS: 2

12. In Proposition 1C, the main operator is a:
a. Dot.
b. Horseshoe.
c. Wedge.
d. Triple bar.
e. Tilde.

ANS: E PTS: 2

Proposition 2C
Given the following proposition:
$\sim[(A \equiv \sim Y) \bullet (B \supset X)] \bullet [(B \vee \sim X) \bullet (X \equiv A)]$

13. Given that A and B are true and X and Y are false, determine the truth value of Proposition 2C.
a. True.
b. False.

ANS: B PTS: 2

14. In Proposition 2C, the main operator is a:
a. Triple bar.
b. Wedge.
c. Tilde.
d. Dot.
e. Horseshoe.

ANS: D PTS: 2

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 1C
Given the following statement:
$(H \vee \sim K) \equiv (K \supset H)$

15. Statement 1C is:
a. Self-contradictory.
b. Contingent.
c. Consistent.
d. Logically equivalent.
e. Tautologous.

ANS: E PTS: 4

16. The truth table for Statement 1C has how many lines?
a. Six.
b. Eight.
c. Four.
d. Two.
e. Nine.

ANS: C PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 2C
Given the following statement:
$[G \supset (R \bullet N)] \vee [R \supset (G \bullet N)]$

17. Statement 2C is:
    a. Tautologous.
    b. Contingent.
    c. Inconsistent.
    d. Self-contradictory.
    e. Consistent.

    ANS: B PTS: 4

18. The truth table for Statement 2C has how many lines?
    a. Eight.
    b. Nine.
    c. Four.
    d. Six.
    e. Twelve.

    ANS: A PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

19. Given the statement:
    $(A \vee \sim S) \bullet (S \bullet \sim A)$

    This statement is:
    a. Valid.
    b. Tautologous.
    c. Self-contradictory.
    d. Contingent.
    e. Inconsistent.

    ANS: C PTS: 4

20. Given the pair of statements:
    $\sim(H \equiv R)$ and $\sim(R \supset \sim H)$

    These statements are:
    a. Logically equivalent.
    b. Contradictory.
    c. Consistent.
    d. Inconsistent.
    e. Invalid.

    ANS: D PTS: 4

21. Given the pair of statements:

$Q \equiv N$ and $(N \bullet \sim Q) \vee (Q \bullet \sim N)$

These statements are:
a. Contradictory.
b. Logically equivalent.
c. Inconsistent.
d. Consistent.
e. Valid.

ANS: A PTS: 4

22. Given the pair of statements:
$R \supset \sim B$ and $\sim(B \bullet R)$

These statements are:
a. Consistent.
b. Inconsistent.
c. Valid.
d. Contradictory.
e. Logically equivalent.

ANS: E PTS: 4

23. Given the argument:
$K \vee E$ / $E \supset \sim K$ // $K \equiv \sim E$

This argument is:
a. Invalid; fails in 2nd line.
b. Valid.
c. Invalid; fails in 1st line.
d. Invalid; fails in 4th line.
e. Invalid; fails in 3rd line.

ANS: B PTS: 4

24. Given the argument:
$P \vee J$ / $\sim(J \bullet \sim P)$ // $J \equiv \sim P$

This argument is:
a. Invalid; fails in 3rd line.
b. Invalid; fails in 2nd line.
c. Invalid; fails in 1st line.
d. Valid.
e. Invalid; fails in 4th line.

ANS: C PTS: 4

INSTRUCTIONS: Use indirect truth tables to answer the following problems.

25. Given the argument:
$C \supset \sim M$ / $I \supset \sim H$ / $(N \bullet I) \vee (G \bullet C)$ / $H \vee M$ // $G \bullet M$

This argument is:
a. Uncogent.
b. Cogent.

c. Sound.
d. Invalid.
e. Valid.

ANS: D PTS: 4

26. Given the argument:
$W \vee \sim S$ / $E \vee \sim A$ / $(K \vee L) \equiv (A \bullet S)$ // $L \supset (E \bullet W)$

This argument is:
a. Invalid.
b. Uncogent.
c. Valid.
d. Cogent.
e. Sound.

ANS: C PTS: 4

27. Given the statements:
$R \supset (Q \vee \sim N)$ / $Q \supset (U \supset \sim B)$ / $B \supset (N \bullet U)$ / $R \bullet B$

These statements are:
a. Inconsistent.
b. Invalid.
c. Consistent.
d. Logically equivalent.
e. Tautologous.

ANS: A PTS: 4

28. Given the statements:
$P \equiv (S \vee \sim A)$ / $A \supset (M \bullet J)$ / $J \supset (P \bullet S)$ / $J \equiv A$

These statements are:
a. Valid.
b. Contradictory.
c. Tautologous.
d. Inconsistent.
e. Consistent.

ANS: E PTS: 4

INSTRUCTIONS: Determine whether the following symbolized arguments are valid or invalid by identifying the form of each. In some cases the argument must be rewritten using double negation or commutativity before it has a named form. Those arguments without a specific name are invalid.

29. $\sim S \vee \sim T$
T
$\sim S$
a. MP—valid.
b. DS—valid.
c. MT—valid.
d. DA—invalid.
e. Invalid.

ANS: B PTS: 2

30. ~H ⊃ ~B
B
H
a. MT—valid.
b. Invalid.
c. MP—valid.
d. DS—valid.
e. DA—invalid.

ANS: A PTS: 2

31. ~B ⊃ ~J
~J
~B
a. DA—invalid.
b. AC—invalid.
c. MP—valid.
d. MT—valid.
e. DS—valid.

ANS: B PTS: 2

32. D ∨ M
(M ⊃ A) • (D ⊃ C)
A ∨ C
a. HS—valid.
b. Invalid.
c. DD—valid.
d. MP—valid.
e. CD—valid.

ANS: E PTS: 2

33. K ⊃ R
E ⊃ R
K ⊃ E
a. HS—valid.
b. CD—valid.
c. Invalid.
d. CD—invalid.
e. DA—invalid.

ANS: C PTS: 2

34. F ⊃ ~K
~N ⊃ F
~N ⊃ ~K
a. MT—valid.
b. HS—valid.
c. Invalid.
d. DD—invalid.

e. CD—valid.

ANS: B PTS: 2

35. $P \vee G$
$\underline{(H \supset \sim P) \bullet (C \supset \sim G)}$
$\sim H \vee \sim C$
a. CD—valid.
b. Invalid.
c. MT—valid.
d. DD—valid.
e. CD—invalid.

ANS: D PTS: 2

36. $G \supset \sim R$
$\underline{G \quad\quad}$
$\sim R$
a. DS—invalid.
b. MP—valid.
c. MT—valid.
d. DA—valid.
e. HS—valid.

ANS: B PTS: 2

37. $\sim E \vee \sim H$
$\underline{\sim H \quad\quad}$
$\sim E$
a. Invalid
b. CD—valid.
c. DD—valid.
d. CD—invalid.
e. MP—valid.

ANS: A PTS: 2

38. $\sim Q \supset \sim R$
$\underline{Q \quad\quad\quad}$
R
a. AC—invalid.
b. MP—valid.
c. HS—valid.
d. MT—invalid.
e. DA—invalid.

ANS: E PTS: 2

Chapter 6 Test D

MULTIPLE CHOICE

INSTRUCTIONS: Select the correct translation for each problem.

1. Amherst reduces class size, and either Williams increases enrollment or Smith raises tuition.
   a. $A \bullet (W \supset S)$
   b. $A \bullet (W \vee S)$
   c. $(A \bullet W) \vee S$
   d. $A \supset (W \vee S)$
   e. $A \vee (W \bullet S)$

   ANS: B PTS: 2

2. If Williams increases enrollment, then not both Fordham and Georgetown expand course offerings.
   a. $W \vee \sim(F \supset G)$
   b. $W \supset \sim(F \vee G)$
   c. $W \supset (\sim F \bullet \sim G)$
   d. $W \equiv \sim(F \bullet G)$
   e. $W \supset \sim(F \bullet G)$

   ANS: E PTS: 2

3. Rice hires new faculty only if neither Duke nor Tulane increases student aid.
   a. $\sim(D \vee T) \supset R$
   b. $R \equiv \sim(D \vee T)$
   c. $R \supset \sim(D \vee T)$
   d. $R \supset (\sim D \vee \sim T)$
   e. $(\sim D \vee \sim T) \supset R$

   ANS: C PTS: 2

4. Both Baylor and Rice do not raise tuition provided that Smith increases enrollment.
   a. $S \supset (\sim B \bullet \sim R)$
   b. $(\sim B \bullet \sim R) \vee S$
   c. $(\sim B \bullet \sim R) \supset S$
   d. $S \supset \sim(B \bullet R)$
   e. $\sim(B \bullet R) \supset S$

   ANS: A PTS: 2

5. Williams offers new scholarships if and only if either Amherst reduces class size or Smith does not hire new faculty.
   a. $(A \vee S) \supset W$
   b. $W \equiv \sim(A \vee S)$
   c. $W \supset (A \vee \sim S)$
   d. $W \equiv (A \vee \sim S)$
   e. $(W \equiv A) \vee \sim S$

   ANS: D PTS: 2

6. If Fordham expands course offerings, then if Georgetown increases its endowment, then both Duke raises tuition and Tulane reduces class size.
   a. $(F \supset G) \supset (D \bullet T)$
   b. $[F \supset (G \supset D)] \bullet T$
   c. $F \supset [G \supset (D \bullet T)]$
   d. F [(G ⊃ D) T]
   e. $F \supset G \supset (D \bullet T)$

   ANS: C PTS: 2

7. If Baylor's hiring new faculty implies that Rice increases enrollment, then Williams raises tuition if Smith expands course offerings.
   a. $(R \supset B) \supset (S \supset W)$
   b. $(B \supset R) \equiv (S \supset W)$
   c. $S \supset [(B \supset R) \supset W]$
   d. $B \supset [R \supset S \supset W]$
   e. $(B \supset R) \supset (S \supset W)$

   ANS: E PTS: 2

8. Tulane increasing enrollment is a necessary condition for Duke's reducing class size if and only if Fordham's raising tuition is a sufficient condition for Georgetown's expanding course offerings.
   a. $(D \vee T) \equiv (F \vee G)$
   b. $(D \supset T) \equiv (F \supset G)$
   c. $(T \supset D) \equiv (G \supset F)$
   d. $(F \supset G) \supset (D \supset T)$
   e. $(D \supset T) \supset (F \supset G)$

   ANS: B PTS: 2

9. Rice's reducing class size is a sufficient and necessary condition for Baylor's hiring new faculty unless Amherst's raising tuition implies that either Georgetown or Fordham does not offer new scholarships.
   a. $(R \equiv B) \vee [A \supset (\sim G \vee \sim F)]$
   b. $(B \supset R) \vee [A \supset \sim(G \bullet F)]$
   c. $(R \supset B) \supset [A \supset (\sim G \vee \sim F)]$
   d. $[A \supset (\sim G \vee \sim F)] \supset (R \equiv B)$
   e. $(R \equiv B) \vee [A \supset \sim(G \vee F)]$

   ANS: A PTS: 2

10. Williams hires new faculty if either Smith increases enrollment or Amherst does not raise tuition, but Tulane reduces class size only if neither Rice expands course offerings nor Baylor offers new scholarships.
    a. $[W \supset \sim(S \vee A)] \vee [T \supset \sim(R \vee B)]$
    b. $[T \supset \sim(R \vee B)] \supset [(S \vee \sim A) \supset W]$
    c. $[W \supset (S \vee \sim A)] \bullet [\sim(R \vee B) \supset T]$
    d. $[(S \vee \sim A) \supset W] \bullet [T \supset \sim(R \vee B)]$
    e. $[(S \vee \sim A) \supset W] \bullet [T \supset (\sim R \vee \sim B)]$

    ANS: D PTS: 2

Proposition 1D
Given the following proposition:
$\sim(A \bullet \sim X) \equiv [A \supset (Y \vee \sim B)]$

11. Given that A and B are true and X and Y are false, determine the truth value of Proposition 1D.
    a. True.
    b. False.

    ANS: A PTS: 2

12. In Proposition 1D, the main operator is a:
    a. Tilde.
    b. Wedge.
    c. Horseshoe.
    d. Dot.
    e. Triple bar.

    ANS: E PTS: 2

Proposition 2D
Given the following proposition:
$[(A \bullet \sim X) \supset (\sim B \equiv Y)] \bullet [\sim(Y \vee \sim A) \equiv (B \bullet X)]$

13. Given that A and B are true and X and Y are false, determine the truth value of Proposition 2D.
    a. True.
    b. False.

    ANS: B PTS: 2

14. In Proposition 2D, the main operator is a:
    a. Wedge.
    b. Horseshoe.
    c. Dot.
    d. Tilde.
    e. Triple bar.

    ANS: C PTS: 2

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 1D
Given the following statement:
$\sim(H \supset A) \vee (A \supset H)$

15. Statement 1D is:
    a. Self-contradictory.
    b. Inconsistent.
    c. Consistent.
    d. Tautologous.
    e. Contingent.

    ANS: E PTS: 4

16. The truth table for Statement 1D has how many lines?
    a. Six.
    b. Eight.
    c. Two.

d. Four.
e. Nine.

ANS: D PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 2D
Given the following statement:
$[(N \vee R) \supset {\sim}R] \equiv R$

17. Statement 2D is:
a. Consistent.
b. Self-contradictory.
c. Tautologous.
d. Contingent.
e. Logically equivalent.

ANS: B PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 3D
Given the following statement:
$(M \supset {\sim}E) \vee (R \supset E)$

18. Statement 3D is:
a. Tautologous.
b. Self-contradictory.
c. Contingent.
d. Inconsistent.
e. Valid.

ANS: A PTS: 4

19. The truth table for Statement 3D has how many lines?
a. Four.
b. Nine.
c. Twelve.
d. Six.
e. Eight.

ANS: E PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

20. Given the pair of statements:
$M \supset L$ and ${\sim}(L \supset M)$

These statements are:
a. Inconsistent.
b. Invalid.

c. Consistent.
d. Logically equivalent.
e. Contradictory.

ANS: C PTS: 4

21. Given the pair of statements:
$\sim(Q \supset \sim A)$ and $A \bullet Q$

These statements are:
a. Consistent.
b. Valid.
c. Contradictory.
d. Logically equivalent.
e. Inconsistent.

ANS: D PTS: 4

22. Given the pair of statements:
$N \vee (E \bullet \sim H)$ and $(H \bullet \sim N) \vee \sim(E \vee N)$

These statements are:
a. Consistent.
b. Contradictory.
c. Inconsistent.
d. Logically equivalent.
e. Valid.

ANS: B PTS: 4

23. Given the argument:
$S \supset (K \vee \sim S)$ / $K \supset S$ // $S \equiv K$

This argument is:
a. Invalid; fails in 3rd line.
b. Invalid; fails in 2nd line.
c. Invalid; fails in 1st line.
d. Invalid; fails in 4th line.
e. Valid.

ANS: E PTS: 4

24. Given the argument:
$M \supset Q$ / $M \vee \sim Q$ // $M \bullet Q$

This argument is:
a. Invalid; fails in 4th line.
b. Valid.
c. Invalid; fails in 5th line.
d. Invalid; fails in 2nd line.
e. Invalid; fails in 3rd line.

ANS: A PTS: 4

INSTRUCTIONS: Use indirect truth tables to answer the following problems.

25. Given the argument:
$R \supset (G \bullet D)$ / $N \supset (A \bullet L)$ / $R \vee N$ / $L \supset K$ // $D \bullet K$

This argument is:
a. Uncogent.
b. Sound.
c. Invalid.
d. Valid.
e. Cogent.

ANS: C PTS: 4

26. Given the argument:
$(S \vee B) \supset M$ / $S \vee \sim Q$ / $A \supset B$ / $A \vee Q$ // M

This argument is:
a. Cogent.
b. Valid.
c. Sound.
d. Uncogent.
e. Invalid.

ANS: B PTS: 4

27. Given the statements:
$N \supset (L \bullet S)$ / $(S \vee W) \supset B$ / $G \supset \sim B$ / $G \supset N$

These statements are:
a. Consistent.
b. Invalid.
c. Tautologous.
d. Logically equivalent.
e. Inconsistent.

ANS: A PTS: 4

28. Given the statements:
$R \supset M$ / $C \supset E$ / $M \supset \sim E$ / $R \bullet C$

These statements are:
a. Contradictory.
b. Tautologous.
c. Valid.
d. Inconsistent.
e. Consistent.

ANS: D PTS: 4

INSTRUCTIONS: Determine whether the following symbolized arguments are valid or invalid by identifying the form of each. In some cases the argument must be rewritten using double negation or commutativity before it has a named form. Those arguments without a specific name are invalid.

29. L
<u>$\sim E \supset \sim L$</u>

E

a. DA—invalid.
b. MP—valid.
c. MT—valid.
d. AC—invalid.
e. HS—valid.

ANS: C PTS: 2

30. $E \vee \sim N$
$\underline{\sim N}$
$\sim E$

a. AC—invalid.
b. MT—valid.
c. DA—invalid.
d. MP—valid.
e. Invalid.

ANS: E PTS: 2

31. $(\sim H \supset B) \bullet (L \supset \sim T)$
$\underline{T \vee \sim B}$
$H \vee \sim L$

a. MT—valid.
b. DD—valid.
c. CD—valid.
d. HS—valid.
e. CD—invalid.

ANS: B PTS: 2

32. M
$\underline{\sim M \supset G}$
$\sim G$

a. MP—valid.
b. MT—invalid.
c. AC—invalid.
d. DA—invalid.
e. Invalid.

ANS: D PTS: 2

33. $\sim T \supset \sim W$
$\underline{\sim T}$
$\sim W$

a. MP—valid.
b. AC—valid.
c. MT—valid.
d. AC—invalid.
e. DS—valid.

ANS: A PTS: 2

34. $(L \supset \sim C) \bullet (D \supset \sim Q)$
$\underline{\sim L \vee \sim D}$
$C \vee Q$
a. DA—invalid.
b. CD—valid.
c. Invalid.
d. DD—valid.
e. CD—invalid.

ANS: C PTS: 2

35. $\sim A \supset \sim H$
$\underline{E \supset \sim A}$
$E \supset \sim H$
a. DD—valid.
b. MP—valid.
c. CD—valid.
d. Invalid.
e. HS—valid.

ANS: E PTS: 2

36. $\sim P \supset \sim D$
$\underline{\sim D}$
$\sim P$
a. MP—valid.
b. DA—invalid.
c. AC—invalid.
d. MT—valid.
e. DS—invalid.

ANS: C PTS: 2

37. $(S \supset Q) \bullet (\sim W \supset \sim C)$
$\underline{\sim W \vee S}$
$Q \vee \sim C$
a. MP—valid.
b. Invalid.
c. DD—valid.
d. CD—valid.
e. DD—invalid.

ANS: D PTS: 2

38. $Q \vee \sim S$
$\underline{S}$
Q
a. DA—invalid.
b. DS—valid.
c. MT—valid.
d. Invalid.
e. MP—valid.

ANS: B PTS: 2

Chapter 6 Test E

MULTIPLE CHOICE

INSTRUCTIONS: Select the correct translation for each problem.

1. *Redbook* increases circulation or both *Glamour* hires models and *Cosmo* raises its price.
   a. $R \vee G \bullet C$
   b. $R \supset (G \bullet C)$
   c. $R \bullet (G \vee C)$
   d. $(G \bullet C) \supset R$
   e. $R \vee (G \bullet C)$

   ANS: E PTS: 2

2. If *Time* expands coverage, then neither *Money* hires new writers nor *Forbes* solicits new advertisers.
   a. $T \supset (\sim M \vee F)$
   b. $T \supset \sim(M \vee F)$
   c. $T \supset (\sim M \vee \sim F)$
   d. $T \supset \sim(M \bullet F)$
   e. $\sim(M \vee F) \supset T$

   ANS: B PTS: 2

3. *People* raises its price only if either *Time* expands coverage or *Newsweek* does not increase circulation.
   a. $P \supset T \vee \sim N$
   b. $(P \supset T) \vee \sim N$
   c. $(T \vee \sim N) \supset P$
   d. $P \supset (T \vee \sim N)$
   e. $P \equiv (T \vee \sim N)$

   ANS: D PTS: 2

4. Not both *Playboy* changes its image and *Maxim* changes its cover given that *Glamour* hires models.
   a. $G \supset \sim(P \bullet M)$
   b. $\sim(P \bullet M) \equiv G$
   c. $\sim(P \bullet M) \supset G$
   d. $\sim(P \bullet M) \vee G$
   e. $G \supset (\sim P \bullet \sim M)$

   ANS: A PTS: 2

5. *Forbes* increases circulation if and only if both *Time* and *Newsweek* do not raise their price.
   a. $F \equiv (\sim T \vee \sim N)$
   b. $F \supset (\sim T \bullet \sim N)$
   c. $F \equiv (\sim T \bullet \sim N)$
   d. $F \equiv \sim(T \bullet N)$
   e. $(\sim T \bullet \sim N) \supset F$

   ANS: C PTS: 2

6. If *Redbook*'s hiring models implies that *Cosmo* changes its cover, then either *Maxim* becomes more risqué or *Playboy* deletes its centerfold.
   a. $R \supset [C \supset (M \vee P)]$
   b. $(R \supset C) \equiv (M \vee P)$
   c. $(C \supset R) \supset (M \vee P)$
   d. $(R \supset C) \supset (M \vee P)$
   e. $(M \vee P) \supset (R \supset C)$

   ANS: D PTS: 2

7. If *Forbes* increases circulation, then if both *Newsweek* raises its price and *Time* expands coverage, then *Money* solicits new advertisers.
   a. $F \supset [(N \bullet T) \supset M]$
   b. $(N \bullet T) \supset (F \supset M)$
   c. $F \supset (N \bullet T) \supset M$
   d. $[F \supset (N \bullet T)] \supset M$
   e. $(F \supset N) \bullet (T \supset M)$

   ANS: A PTS: 2

8. *Glamour*'s hiring models is a sufficient condition for *Cosmo*'s adding new features unless *Playboy*'s deleting its centerfold is a necessary condition for *Maxim*'s changing its image.
   a. $(C \supset G) \supset (P \supset M)$
   b. $G \supset [C \vee (P \supset M)]$
   c. $(C \supset G) \vee (P \supset M)$
   d. $(G \supset C) \supset (M \supset P)$
   e. $(G \supset C) \vee (M \supset P)$

   ANS: E PTS: 2

9. *Redbook*'s increasing its price is a sufficient and necessary condition for *People*'s hiring new writers, provided that *Newsweek*'s expanding coverage implies that *Time* changes its cover.
   a. $R \equiv [P \supset (N \supset T)]$
   b. $(N \supset T) \supset (R \equiv P)$
   c. $(R \equiv P) \supset (N \supset T)$
   d. $(N \supset T) \supset (R \supset P)$
   e. $R \equiv [(N \supset T) \supset P]$

   ANS: B PTS: 2

10. *Cosmo* raises its price if and only if both *Redbook* increases circulation and *Glamour* hires new writers, but either *Time* or *Newsweek* expands coverage if *Forbes* adds new features.
    a. $[(C \equiv R) \bullet G] \bullet [(F \supset T) \vee N]$
    b. $(R \bullet G) \equiv [(C \supset F) \supset (T \vee N)]$
    c. $[C \equiv (R \bullet G)] \bullet [F \supset (T \vee N)]$
    d. $[C \supset (R \bullet G)] \bullet [F \equiv (T \vee N)]$
    e. $C \equiv \{(R \bullet G) \bullet [F \supset (T \vee N)]\}$

    ANS: C PTS: 2

Proposition 1E
Given the following proposition:
$\sim\{[(Y \equiv \sim A) \supset (\sim X \vee Y)] \bullet (\sim B \vee \sim X)\}$

11. Given that A and B are true and X and Y are false, determine the truth value of Proposition 1E.
    a. True.
    b. False.

    ANS: B PTS: 2

12. In Proposition 1E, the main operator is a:
    a. Dot.
    b. Triple bar.
    c. Wedge.
    d. Tilde.
    e. Horseshoe.

    ANS: D PTS: 2

Proposition 2E
Given the following proposition:
$[\sim(A \vee Y) \equiv (\sim X \supset B)] \vee [\sim(Y \bullet \sim B) \supset (X \supset \sim A)]$

13. Given that A and B are true and X and Y are false, determine the truth value of Proposition 2E.
    a. True.
    b. False.

    ANS: A PTS: 2

14. In Proposition 2E, the main operator is a:
    a. Horseshoe.
    b. Dot.
    c. Tilde.
    d. Triple bar.
    e. Wedge.

    ANS: E PTS: 2

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 1E
Given the following statement:
$(G \equiv \sim H) \vee (H \supset G)$

15. Statement 1E is:
    a. Logically equivalent.
    b. Self-contradictory.
    c. Tautologous.
    d. Contingent.
    e. Consistent.

    ANS: C PTS: 4

16. The truth table for Statement 1E has how many lines?
    a. Six.
    b. Eight.
    c. Two.
    d. Four.

e. Nine.

ANS: D PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 2E
Given the following statement:
$(P \supset \sim B) \vee (B \supset \sim L)$

17. Statement 2E is:
    a. Inconsistent.
    b. Contingent.
    c. Consistent.
    d. Tautologous.
    e. Self-contradictory.

    ANS: B PTS: 4

18. The truth table for Statement 2E has how many lines?
    a. Nine.
    b. Twelve.
    c. Four.
    d. Six.
    e. Eight.

    ANS: E PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

19. Given the statement:
    $(K \equiv \sim S) \bullet \sim(S \supset \sim K)$

    This statement is:
    a. Self-contradictory.
    b. Contingent.
    c. Inconsistent.
    d. Valid.
    e. Tautologous.

    ANS: A PTS: 4

20. Given the pair of statements:
    $\sim(K \supset G)$ and $G \vee \sim K$

    These statements are:
    a. Invalid.
    b. Logically equivalent.
    c. Consistent.
    d. Contradictory.
    e. Inconsistent.

    ANS: D PTS: 4

21. Given the pair of statements:
$I \equiv C$ and $C \bullet \sim I$

These statements are:
a. Valid.
b. Consistent.
c. Logically equivalent.
d. Contradictory.
e. Inconsistent.

ANS: E PTS: 4

22. Given the pair of statements:
$W \supset (J \bullet \sim M)$ and $(J \vee \sim W) \bullet \sim(M \bullet W)$

These statements are:
a. Inconsistent.
b. Logically equivalent.
c. Contradictory.
d. Valid.
e. Consistent.

ANS: B PTS: 4

23. Given the argument:
$S \vee L \ / \ L \supset \sim S \ // \ S \vee \sim L$

This argument is:
a. Invalid; fails in 1st line.
b. Invalid; fails in 2nd line.
c. Valid.
d. Invalid; fails in 3rd line.
e. Invalid; fails in 4th line.

ANS: D PTS: 4

24. Given the argument:
$N \equiv D \ / \ D \supset \sim N \ // \ \sim N$

This argument is:
a. Invalid; fails in 2nd line.
b. Invalid; fails in 4th line.
c. Valid.
d. Invalid; fails in 5th line.
e. Invalid; fails in 3rd line.

ANS: C PTS: 4

INSTRUCTIONS: Use indirect truth tables to answer the following problems.

25. Given the argument:
$H \supset (R \bullet J) \ / \ (R \vee A) \supset E \ / \ J \supset \sim P \ / \ E \supset P \ // \ \sim H$

This argument is:

a. Valid.
b. Invalid.
c. Uncogent.
d. Cogent.
e. Sound.

ANS: A PTS: 4

26. Given the argument:
$Q \supset (C \bullet N)$ / $S \supset (C \vee N)$ / $Q \vee S$ / $N \supset K$ // $K \bullet C$

This argument is:
a. Sound.
b. Uncogent.
c. Invalid.
d. Cogent.
e. Valid.

ANS: C PTS: 4

27. Given the statements:
$G \bullet W$ / $G \supset (\sim R \supset Q)$ / $W \supset (R \supset \sim Q)$ / $G \supset Q$

These statements are:
a. Inconsistent.
b. Logically equivalent.
c. Invalid.
d. Tautologous.
e. Consistent.

ANS: E PTS: 4

28. Given the statements:
$(E \vee P) \supset H$ / $\sim N \supset (P \bullet E)$ / $N \supset \sim H$ / $E \equiv \sim P$

These statements are:
a. Contradictory.
b. Tautologous.
c. Valid.
d. Inconsistent.
e. Consistent.

ANS: D PTS: 4

INSTRUCTIONS: Determine whether the following symbolized arguments are valid or invalid by identifying the form of each. In some cases the argument must be rewritten using double negation or commutativity before it has a named form. Those arguments without a specific name are invalid.

29. $\sim G \supset E$
$\underline{E \supset \sim J}$
$\sim G \supset \sim J$
a. MP—valid.
b. HS—valid.
c. Invalid.

d. CD—valid.
e. DS—valid.

ANS: B PTS: 2

30. $(J \supset \sim M) \bullet (\sim A \supset R)$
$\underline{M \vee \sim R}$
$\sim J \vee A$
a. DD—valid.
b. Invalid.
c. CD—valid.
d. MT—valid.
e. CD—invalid.

ANS: A PTS: 2

31. W
$\underline{\sim W \supset \sim K}$
K
a. AC—invalid.
b. MT—valid.
c. DA—invalid.
d. DS—invalid.
e. MP—valid.

ANS: C PTS: 2

32. $P \vee \sim D$
$\underline{\sim P}$
$\sim D$
a. MP—valid.
b. HS—valid.
c. MT—valid.
d. DA—invalid.
e. DS—valid.

ANS: E PTS: 2

33. $\sim A$
$\underline{\sim A \vee J}$
J
a. AC—invalid.
b. DS—invalid.
c. MP—valid.
d. Invalid.
e. HS—valid.

ANS: D PTS: 2

34. $S \supset \sim M$
$\underline{S}$
$\sim M$
a. HS—valid.

b. AC—invalid.
c. MT—valid.
d. DS—valid.
e. MP—valid.

ANS: E PTS: 2

35. $S \supset \sim R$
$\underline{\sim R}$
S
a. MT—invalid.
b. MP—valid.
c. DA—invalid.
d. AC—invalid.
e. DS—valid.

ANS: D PTS: 2

36. $\sim B \supset K$
$\underline{\sim W \supset \sim B}$
$W \supset \sim K$
a. DD—invalid.
b. Invalid.
c. HS—valid.
d. CD—valid.
e. DS—valid.

ANS: B PTS: 2

37. $(B \supset \sim T) \bullet (\sim B \supset N)$
$\underline{\sim B \vee B}$
$\sim T \vee N$
a. CD—valid.
b. Invalid.
c. DD—valid.
d. DA—invalid.
e. MP—valid.

ANS: A PTS: 2

38. $\sim F$
$\underline{\sim B \supset F}$
B
a. MP—valid.
b. DS—invalid.
c. MT—valid.
d. DA—invalid.
e. DS—valid.

ANS: C PTS: 2

Chapter 6 Test F

MULTIPLE CHOICE

INSTRUCTIONS: Select the correct translation for each problem.

1. Either Safeco reduces premiums and Geico cuts costs or Farmers hires agents.
   a. $S \bullet (G \vee F)$
   b. $(S \bullet G) \supset F$
   c. $(S \bullet G) \vee F$
   d. $(S \vee G) \bullet F$
   e. $S \vee (G \bullet F)$

   ANS: C PTS: 2

2. Not both Travelers and Conseco run an ad if Liberty opens new offices.
   a. $L \supset \sim(T \bullet C)$
   b. $\sim[C \bullet (L \supset C)]$
   c. $L \supset (\sim T \bullet \sim C)$
   d. $\sim(T \bullet C) \supset L$
   e. $(\sim T \bullet \sim C) \supset L$

   ANS: A PTS: 2

3. Progressive increases its territory if neither Safeco cuts costs nor Travelers runs an ad.
   a. $\sim(S \vee T) \equiv P$
   b. $P \supset (\sim S \vee \sim T)$
   c. $(\sim S \vee \sim T) \supset P$
   d. $\sim(S \vee T) \supset P$
   e. $P \supset \sim(S \vee T)$

   ANS: D PTS: 2

4. If either Nationwide or Geico does not open new offices, then Metropolitan does not hire agents.
   a. $(\sim N \vee \sim G) \supset \sim M$
   b. $(\sim N \bullet \sim G) \supset \sim M$
   c. $\sim(N \vee G) \supset \sim M$
   d. $\sim N \vee (\sim G \supset \sim M)$
   e. $\sim[(N \vee G) \supset M]$

   ANS: A PTS: 2

5. Progressive expands coverage if and only if both Liberty and Conseco do not cut costs.
   a. $(\sim L \bullet \sim C) \supset P$
   b. $P \equiv (\sim L \bullet \sim C)$
   c. $P \equiv \sim(L \bullet C)$
   d. $P \equiv (\sim L \vee \sim C)$
   e. $P \supset (\sim L \bullet \sim C)$

   ANS: B PTS: 2

6. Metropolitan's reorganizing implies that Allstate hires agents, provided that Liberty reduces premiums.

a. $M \supset (L \supset A)$
b. $L \supset (A \supset M)$
c. $(L \supset M) \supset A$
d. $M \supset (A \supset L)$
e. $L \supset (M \supset A)$

ANS: E PTS: 2

7. If either Farmers runs an ad or Nationwide cuts costs, then if Safeco expands coverage then Geico pays a dividend.
a. $(F \vee N) \supset (G \supset S)$
b. $[F \supset (S \supset G)] \vee [N \supset (S \supset G)]$
c. $[(F \vee N) \supset S] \supset G$
d. $(F \vee N) \supset (S \supset G)$
e. $F \vee [N \supset (S \supset G)]$

ANS: D PTS: 2

8. Allstate's increasing its territory is a sufficient condition for Liberty's restructuring only if Progressive's cutting costs is a necessary condition for Conseco's hiring agents.
a. $(C \supset P) \supset (A \supset L)$
b. $(P \supset C) \supset (L \supset A)$
c. $(A \supset L) \supset (C \supset P)$
d. $(A \supset L) \equiv (C \supset P)$
e. $(L \supset A) \supset (P \supset C)$

ANS: C PTS: 2

9. If either Nationwide's running an ad or Progressive's paying a dividend implies that Allstate hires agents, then Safeco's opening new offices is a sufficient and necessary condition for Liberty's reducing premiums.
a. $[A \supset (N \vee P)] \supset (S \equiv L)$
b. $(S \equiv L) \supset [(N \vee P) \supset A]$
c. $(N \vee P) \supset [A \supset (S \equiv L)]$
d. $[(N \vee P) \supset A] \supset (S \supset L)$
e. $[(N \vee P) \supset A] \supset (S \equiv L)$

ANS: E PTS: 2

10. Travelers and Farmers cut costs given that Safeco opens new offices, but Metropolitan restructures if and only if either Nationwide expands coverage or Conseco reduces premiums.
a. $[(T \bullet F) \supset S] \bullet [(N \vee C) \supset M]$
b. $[(T \bullet F) \supset S] \supset [M \equiv (N \vee C)]$
c. $[(T \bullet F) \supset S] \bullet [M \equiv (N \vee C)]$
d. $[S \supset (T \bullet F)] \bullet [M \equiv (N \vee C)]$
e. $[S \supset (T \bullet F)] \bullet [M \supset (N \vee C)]$

ANS: D PTS: 2

Proposition 1F
Given the following proposition:
$\sim[\sim(X \vee \sim Y) \equiv (\sim X \supset \sim A)] \vee \sim(B \bullet \sim A)$

11. Given that A and B are true and X and Y are false, determine the truth value of Proposition 1F.

a. True.
b. False.

ANS: A PTS: 2

12. In Proposition 1F, the main operator is a:
a. Dot.
b. Horseshoe.
c. Wedge.
d. Tilde.
e. Triple bar.

ANS: C PTS: 2

Proposition 2F
Given the following proposition:
$[(X \supset \sim Y) \bullet \sim(X \vee \sim B)] \supset [\sim(B \supset \sim Y) \equiv (A \bullet \sim Y)]$

13. Given that A and B are true and X and Y are false, determine the truth value of Proposition 2F.
a. True.
b. False.

ANS: B PTS: 2

14. In Proposition 2F, the main operator is a:
a. Triple bar.
b. Dot.
c. Tilde.
d. Wedge.
e. Horseshoe.

ANS: E PTS: 2

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 1F
Given the following statement:
$\sim[K \supset (N \supset K)]$

15. Statement 1F is:
a. Self-contradictory.
b. Contingent.
c. Consistent.
d. Tautologous.
e. Logically equivalent.

ANS: A PTS: 4

16. The truth table for Statement 1F has how many lines?
a. Six.
b. Eight.
c. Two.
d. Four.
e. Nine.

ANS: D PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 2F
Given the following statement:
$(Q \supset \sim C) \bullet (R \supset \sim Q)$

17. Statement 2F is:
    a. Tautologous.
    b. Inconsistent.
    c. Contingent.
    d. Self-contradictory.
    e. Consistent.

    ANS: C PTS: 4

18. The truth table for Statement 2F has how many lines?
    a. Twelve.
    b. Nine.
    c. Four.
    d. Six.
    e. Eight.

    ANS: E PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

19. Given the statement:
    $\sim(S \bullet \sim D) \vee (D \supset S)$

    This statement is:
    a. Valid.
    b. Tautologous.
    c. Inconsistent.
    d. Contingent.
    e. Self-contradictory.

    ANS: B PTS: 4

20. Given the pair of statements:
    $K \supset \sim(E \bullet R)$ and $(E \bullet K) \supset \sim R$

    These statements are:
    a. Inconsistent.
    b. Contradictory.
    c. Consistent.
    d. Logically equivalent.
    e. Invalid.

    ANS: D PTS: 4

21. Given the pair of statements:

M • ~D and D • ~M

These statements are:
a. Logically equivalent.
b. Contradictory.
c. Inconsistent.
d. Consistent.
e. Valid.

ANS: C PTS: 4

22. Given the pair of statements:
Q ≡ ~A and A • ~Q

These statements are:
a. Consistent.
b. Inconsistent.
c. Valid.
d. Contradictory.
e. Logically equivalent.

ANS: A PTS: 4

23. Given the argument:
K ⊃ Q / Q ⊃ ~K // K ≡ Q

This argument is:
a. Invalid; fails in 2nd line.
b. Invalid; fails in 1st line.
c. Valid.
d. Invalid; fails in 4th line.
e. Invalid; fails in 3rd line.

ANS: E PTS: 4

24. Given the argument:
H ⊃ G / G ⊃ H / H ∨ G // G • H

This argument is:
a. Invalid; fails in 1st line.
b. Invalid; fails in 6th line.
c. Invalid; fails in 3rd line.
d. Valid.
e. Invalid; fails in 4th line.

ANS: D PTS: 4

INSTRUCTIONS: Use indirect truth tables to answer the following problems.

25. Given the argument:
R ⊃ D / D ⊃ (N ∨ S) / S ⊃ (P ∨ N) / N ⊃ R // R ≡ N

This argument is:
a. Uncogent.
b. Invalid.

c. Sound.
d. Cogent.
e. Valid.

ANS: B PTS: 4

26. Given the argument:
$Q \supset (A \vee M)$ / $A \supset (W \vee C)$ / $M \supset (E \vee C)$ / $\sim(W \vee E)$ // $Q \supset C$

This argument is:
a. Invalid.
b. Uncogent.
c. Cogent.
d. Valid.
e. Sound.

ANS: D PTS: 4

27. Given the statements:
$J \supset B$ / $B \supset (N \vee C)$ / $N \supset C$ / $J \bullet \sim C$

These statements are:
a. Consistent.
b. Invalid.
c. Inconsistent.
d. Logically equivalent.
e. Tautologous.

ANS: C PTS: 4

28. Given the statements:
$R \supset (G \vee Q)$ / $G \supset (H \bullet P)$ / $Q \supset H$ / $R \supset \sim H$

These statements are:
a. Consistent.
b. Contradictory.
c. Tautologous.
d. Inconsistent.
e. Valid.

ANS: A PTS: 4

INSTRUCTIONS: Determine whether the following symbolized arguments are valid or invalid by identifying the form of each. In some cases the argument must be rewritten using double negation or commutativity before it has a named form. Those arguments without a specific name are invalid.

29. $\sim N \vee W$
$\sim W$
$\sim N$
a. MP—valid.
b. DA—invalid.
c. MT—valid.
d. DS—valid.
e. Invalid.

ANS: D PTS: 2

30. M
$H \supset \sim M$
$\sim H$
a. Invalid.
b. MT—valid.
c. MP—valid.
d. DS—valid.
e. DA—invalid.

ANS: B PTS: 2

31. $\sim N \supset H$
H
$\sim N$
a. DA—invalid.
b. DS—valid.
c. MP—valid.
d. MT—valid.
e. AC—invalid.

ANS: E PTS: 2

32. $(\sim M \supset E) \bullet (K \supset \sim C)$
$K \vee \sim M$
$E \vee \sim C$
a. HS—valid.
b. CD—valid.
c. DD—valid.
d. MP—valid.
e. Invalid.

ANS: B PTS: 2

33. $\sim T \supset F$
$\sim F \supset G$
$\sim T \supset G$
a. Invalid.
b. CD—valid.
c. HS—valid.
d. CD—invalid.
e. DA—invalid.

ANS: A PTS: 2

34. $\sim A \supset \sim F$
$C \supset \sim A$
$C \supset \sim F$
a. MT—valid.
b. CD—valid.
c. Invalid.
d. DD—invalid.

e. HS—valid.

ANS: E PTS: 2

35. $(Q \supset E) \bullet (D \supset \sim E)$
$E \vee \sim E$
$\sim Q \vee \sim D$
a. CD—valid.
b. Invalid.
c. DD—valid.
d. MT—valid.
e. CD—invalid.

ANS: C PTS: 2

36. $\sim G \supset K$
$\sim G$
K
a. DS—invalid.
b. DA—valid.
c. MT—valid.
d. MP—valid.
e. HS—valid.

ANS: D PTS: 2

37. $(H \vee \sim S) \bullet (G \vee \sim A)$
$H \vee G$
$\sim S \vee \sim A$
a. MP—valid.
b. CD—valid.
c. DD—valid.
d. CD—invalid.
e. Invalid

ANS: E PTS: 2

38. $\sim D$
$D \supset \sim L$
L
a. AC—invalid.
b. MP—valid.
c. DA—invalid.
d. MT—invalid.
e. HS—valid.

ANS: C PTS: 2

Chapter 6 Test G

MULTIPLE CHOICE

INSTRUCTIONS: Select the correct translation for each statement.

1. Either Fiat improves mileage and Toyota closes a factory or Honda reduces inventory.
   a. $F \bullet (T \vee H)$
   b. $F \bullet T \vee H$
   c. $(F \vee T) \bullet H$
   d. $(F \bullet T) \vee H$
   e. $F \vee T \bullet H$

   ANS: D PTS: 2

2. If Chrysler increases sales, then it is not the case that both Mercedes introduces a new model and Nissan lays off workers.
   a. $C \supset (\sim M \bullet \sim N)$
   b. $(C \supset \sim M) \bullet N$
   c. $C \supset \sim(M \bullet N)$
   d. $C \supset \sim M \bullet \sim N$
   e. $\sim(M \bullet N) \supset C$

   ANS: C PTS: 2

3. If Nissan lays off workers, then if Toyota closes a factory, then neither Honda nor Fiat reduces inventory.
   a. $N \supset [T \supset \sim(H \vee F)]$
   b. $N \supset T \supset \sim(H \vee F)$
   c. $(N \supset T) \supset \sim(H \vee F)$
   d. $(N \supset T) \supset (\sim H \vee \sim F)$
   e. $N \supset [T \supset (\sim H \vee \sim F)]$

   ANS: A PTS: 2

4. Either Chrysler's increasing sales is a necessary condition for Toyota's closing a factory or Nissan's laying off workers is a sufficient condition for Honda's reducing inventory.
   a. $T \supset [C \supset (N \supset H)]$
   b. $(C \supset T) \vee (N \supset H)$
   c. $(T \supset C) \vee (N \supset H)$
   d. $T \supset [C \vee (N \supset H)]$
   e. $(C \supset T) \vee (H \supset N)$

   ANS: C PTS: 2

5. Honda reduces inventory if and only if Mercedes does not introduce a new model, unless Toyota closes a factory.
   a. $(H \supset \sim M) \vee (\sim M \supset T)$
   b. $(H \equiv \sim M) \vee T$
   c. $T \supset (H \equiv \sim M)$
   d. $H \equiv (\sim M \vee T)$
   e. $(H \supset \sim M) \vee T$

ANS: B PTS: 2

6. Chrysler increases sales only if Honda reduces inventory, provided that Nissan does not lay off workers.
   a. $(C \equiv H) \supset \sim N$
   b. $(C \supset H) \supset \sim N$
   c. $(H \supset C) \supset \sim N$
   d. $\sim N \supset (H \supset C)$
   e. $\sim N \supset (C \supset H)$

   ANS: E PTS: 2

7. Both Nissan lays off workers if Fiat improves mileage and Honda reduces inventory only if Mercedes introduces a new model.
   a. $[F \supset (N \bullet H)] \supset M$
   b. $(F \supset N) \bullet (H \supset M)$
   c. $(N \equiv F) \bullet (H \equiv M)$
   d. $(N \supset F) \bullet (M \supset H)$
   e. $(F \supset N) \equiv (H \supset M)$

   ANS: B PTS: 2

8. Toyota's closing a factory implies that Fiat improves mileage, given that both Chrysler and Nissan do not increase sales.
   a. $(\sim C \bullet \sim N) \supset (T \supset F)$
   b. $(T \supset F) \supset (\sim C \bullet \sim N)$
   c. $\sim(C \bullet N) \supset (T \supset F)$
   d. $T \supset [(\sim C \bullet \sim N) \supset F]$
   e. $T \supset [F \supset (\sim C \bullet \sim N)]$

   ANS: A PTS: 2

9. It is not the case that either Honda reduces inventory and Mercedes introduces a new model or Toyota closes a factory and Fiat improves mileage.
   a. $\sim(H \bullet M) \vee \sim(T \bullet F)$
   b. $(\sim H \bullet \sim M) \vee (\sim T \bullet \sim F)$
   c. $\sim[(H \bullet M) \vee (T \bullet F)]$
   d. $\sim(H \vee M) \bullet \sim(T \vee F)$
   e. $\sim[(H \vee M) \bullet (T \vee F)]$

   ANS: C PTS: 2

10. Honda's reducing inventory is a sufficient and necessary condition for Toyota's closing a factory; also, Nissan lays off workers only if either Chrysler or Fiat does not improve mileage.
    a. $(H \supset T) \bullet [N \supset \sim(C \vee F)]$
    b. $H \equiv \{T \supset [N \supset (\sim C \vee \sim F)]\}$
    c. $[H \equiv (T \bullet N)] \supset (\sim C \vee \sim F)$
    d. $(H \equiv T) \bullet [(\sim C \vee \sim F) \supset N]$
    e. $(H \equiv T) \bullet [N \supset (\sim C \vee \sim F)]$

    ANS: E PTS: 2

Proposition 1G

Given the following proposition:
$[(A \equiv X) \vee (Y \supset \sim B)] \supset \sim[(X \vee B) \bullet (A \bullet Y)]$

11. Given that A and B are true and X and Y are false, determine the truth value of Proposition 1G.
    a. True.
    b. False.

    ANS: A PTS: 2

12. In Proposition 1G, the main operator is a:
    a. Dot.
    b. Tilde.
    c. Horseshoe.
    d. Triple bar.
    e. Wedge.

    ANS: C PTS: 2

Proposition 2G
Given the following proposition:
$\sim[(A \supset Y) \vee \sim(X \supset B)] \bullet [\sim(A \equiv \sim X) \vee (B \supset X)]$

13. Given that A and B are true and X and Y are false, determine the truth value of Proposition 2G.
    a. True.
    b. False.

    ANS: B PTS: 2

14. In Proposition 2G, the main operator is a:
    a. Triple bar.
    b. Wedge.
    c. Horseshoe.
    d. Tilde.
    e. Dot.

    ANS: E PTS: 2

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 1G
Given the following statement:
$(A \bullet B) \equiv (\sim A \bullet \sim B)$

15. Statement 1G is:
    a. Consistent.
    b. Logically equivalent.
    c. Tautologous.
    d. Contingent.
    e. Self-contradictory.

    ANS: D PTS: 4

16. The truth table for Statement 1G has how many lines?
    a. Four.

b. Eight.
c. Two.
d. Six.
e. Nine.

ANS: A PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 2G
Given the following statement:
$\sim(B \vee A) \equiv (\sim A \supset B)$.

17. Statement 2G is:
a. Tautologous.
b. Contingent.
c. Consistent.
d. Self-contradictory.
e. Inconsistent.

ANS: D PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 3G
Given the following statement:
$[A \bullet (B \vee C)] \vee [\sim(A \bullet B) \vee \sim(A \bullet C)]$.

18. Statement 3G is:
a. Valid.
b. Self-contradictory.
c. Tautologous.
d. Inconsistent.
e. Contingent.

ANS: C PTS: 4

19. The truth table for Statement 3G has how many lines?
a. Four.
b. Nine.
c. Twelve.
d. Six.
e. Eight.

ANS: E PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

20. Given the pair of statements:
$(A \vee B) \bullet (\sim A \vee \sim B)$ and $(B \bullet A) \vee (\sim A \bullet \sim B)$.

These statements are:

a. Inconsistent.
b. Contradictory.
c. Invalid.
d. Logically equivalent.
e. Consistent.

ANS: B PTS: 4

21. Given the pair of statements:
$A \vee (B \bullet C)$ and $(B \bullet \sim A) \vee (A \bullet \sim C)$.

These statements are:
a. Logically equivalent.
b. Valid.
c. Contradictory.
d. Consistent.
e. Inconsistent.

ANS: D PTS: 4

22. Given the argument:
$A \supset \sim B \ / \ B \vee A \ // \ \sim B \equiv A$.

This argument is:
a. Invalid; fails in 4th line.
b. Invalid; fails in 2nd line.
c. Valid.
d. Invalid; fails in 1st line.
e. Invalid; fails in 3rd line.

ANS: C PTS: 4

23. Given the argument:
$A \supset (B \bullet \sim C) \ / \ B \supset (C \vee A) \ / \ C \supset \sim A \ // \ C \supset \sim B$.

This argument is:
a. Invalid; fails in 6th line.
b. Valid.
c. Invalid; fails in 5th line.
d. Invalid; fails in 2nd line.
e. Invalid; fails in 3rd line.

ANS: C PTS: 4

INSTRUCTIONS: Use indirect truth tables to answer the following problems.

24. Given the argument:
$(A \bullet B) \vee (C \bullet D) \ / \ E \supset \sim B \ / \ F \supset \sim D \ / \ E \vee F \ // \ A \bullet C$.

This argument is:
a. Valid.
b. Invalid.
c. Uncogent.
d. Cogent.
e. Sound.

ANS: B PTS: 4

25. Given the argument:
$(A \bullet B) \equiv (C \vee D)$ / $A \supset E$ / $B \supset F$ // $C \supset (E \bullet F)$.

This argument is:
a. Cogent.
b. Invalid.
c. Sound.
d. Valid.
e. Uncogent.

ANS: D PTS: 4

26. Given the statements:
$A \supset (B \bullet C)$ / $B \supset (D \vee \sim E)$ / $C \supset (E \vee \sim D)$ / $A \bullet E$.

These statements are:
a. Consistent.
b. Tautologous.
c. Invalid.
d. Logically equivalent.
e. Inconsistent.

ANS: A PTS: 4

27. Given the statements:
$A \equiv (B \vee C)$ / $B \supset D$ / $D \supset E$ / $E \supset \sim B$ / $A \equiv \sim C$.

These statements are:
a. Valid.
b. Tautologous.
c. Consistent.
d. Contradictory.
e. Inconsistent.

ANS: E PTS: 4

INSTRUCTIONS: Identify the form of each argument. Those without a specific name are invalid.

28. Either tobacco advertising will not be curtailed or teenage smoking will increase. Therefore, teenage smoking will increase, since tobacco advertising will be curtailed.
a. Modus tollens.
b. Modus ponens.
c. Disjunctive syllogism.
d. Invalid.
e. Denying the antecedent.

ANS: C PTS: 2

29. If rainfall is normal, then grain reserves will not be tapped, because if the harvest is not abundant, then grain reserves will be tapped, and if rainfall is normal, then the harvest will be abundant.
a. Pure hypothetical syllogism.
b. Invalid.

c. Denying the antecedent.
d. Modus tollens.
e. Affirming the consequent.

ANS: B PTS: 2

30. If our company reduces wages, then it will lose its labor force; but if it does not reduce wages, then it will go bankrupt. Thus, our company will either lose its labor force or go bankrupt, since it will either reduce wages or not reduce them.
a. Constructive dilemma.
b. Invalid.
c. Denying the antecedent.
d. Pure hypothetical syllogism.
e. Destructive dilemma.

ANS: A PTS: 2

31. If computers can play chess, then they can think. But computers cannot think. Thus, computers cannot play chess.
a. Disjunctive syllogism.
b. Invalid.
c. Denying the antecedent.
d. Affirming the consequent.
e. Modus tollens.

ANS: E PTS: 2

32. If the nuts are stale, then they should not be put into the salad. Thus, the nuts are stale, since they should not be put into the salad.
a. Modus ponens.
b. Denying the antecedent.
c. Invalid.
d. Affirming the consequent.
e. Disjunctive syllogism.

ANS: D PTS: 2

33. If dinosaur DNA has deteriorated, then it is impossible to recreate dinosaurs. If dinosaurs perished long ago, then dinosaur DNA has deteriorated. Hence, if dinosaurs perished long ago, then it is impossible to recreate them.
a. Constructive dilemma.
b. Affirming the consequent.
c. Pure hypothetical syllogism.
d. Modus tollens.
e. Invalid.

ANS: C PTS: 2

34. Either we recycle our trash or we will be inundated in garbage. Therefore, we will not be inundated in garbage, since we recycle our trash.
a. Disjunctive syllogism.
b. Destructive dilemma.
c. Pure hypothetical syllogism.
d. Modus ponens.
e. Invalid.

ANS: E PTS: 2

35. If deficit spending is halted, then interest rates will drop; but if inflation heats up, then interest rates will not drop. Accordingly, either deficit spending will not be halted or inflation will not heat up, since interest rates will either drop or not drop.
    a. Destructive dilemma.
    b. Pure hypothetical syllogism.
    c. Constructive dilemma.
    d. Denying the antecedent.
    e. Invalid.

    ANS: A PTS: 2

36. French has many irregular verbs. But if that is so, then French is harder to learn than English. Thus, French is harder to learn than English.
    a. Denying the antecedent.
    b. Constructive dilemma.
    c. Modus ponens.
    d. Affirming the consequent.
    e. Modus tollens.

    ANS: C PTS: 2

37. If eggs do not contain cholesterol, then they are healthy to eat. But eggs do contain cholesterol. Thus, eggs are not healthy to eat.
    a. Modus tollens.
    b. Modus ponens.
    c. Affirming the consequent.
    d. Denying the antecedent.
    e. Invalid.

    ANS: D PTS: 2

INSTRUCTIONS: Select the best answer for the following problems.

38. Escaping between the horns of a dilemma means:
    a. Proving the dilemma unsound by proving the conjunctive premise false.
    b. Proving the dilemma unsound by proving it invalid.
    c. Proving the dilemma invalid by proving the conjunctive premise false.
    d. Proving the dilemma invalid by proving the disjunctive premise false.
    e. Proving the dilemma unsound by proving the disjunctive premise false.

    ANS: E PTS: 2

39. When the disjunctive premise of a dilemma is of the form $p \vee \sim p$, then it is impossible to:
    a. Grasp it by the horns.
    b. Escape between the horns.
    c. Construct a counterdilemma.
    d. Prove it valid.
    e. Prove it sound.

    ANS: B PTS: 2

40. If an ordinary truth table is constructed for a valid argument, then:
    a. There may be one line that has true premise(s) and false conclusion.

b. There is no line that has true premise(s) and false conclusion.
c. There must be at least one line that has true premise(s) and false conclusion.
d. There must be at least one line that has true premise(s) and true conclusion.
e. There must be exactly one line that has true premise(s) and true conclusion.

ANS: B PTS: 2

41. Suppose an indirect truth table is constructed for an argument, and the truth table requires more than one line. If no contradiction is obtained on the first line, then:
a. The argument is valid.
b. The argument could still be valid.
c. The argument is invalid.
d. The argument is consistent.
e. The argument is sound.

ANS: C PTS: 2

42. Suppose an indirect truth table is constructed for a series of statements, and the truth table requires more than one line. If a contradiction is reached on the first line, then:
a. The statements are consistent.
b. The statements are contingent.
c. The statements are inconsistent.
d. The statements could still be invalid.
e. The second line in the truth table must be completed.

ANS: E PTS: 2

Chapter 6 Test H

MULTIPLE CHOICE

INSTRUCTIONS: Select the correct translation for each statement.

1. Delta advertises a sale and either United lowers fares or American hires pilots.
   a. $D \bullet (U \vee A)$
   b. $D \vee (U \bullet A)$
   c. $D \bullet U \vee A$
   d. $(D \bullet U) \vee A$
   e. $D \vee (U \bullet A)$

   ANS: A PTS: 2

2. Frontier's improving service implies that not both Continental buys planes and Southwest expands routes.
   a. $F \supset \sim(C \vee S)$
   b. $F \supset (\sim C \bullet \sim S)$
   c. $F \supset \sim(C \bullet S)$
   d. $(F \supset \sim C) \bullet S$
   e. $F \equiv \sim(C \bullet S)$

   ANS: C PTS: 2

3. Continental buys planes unless neither Frontier improves service nor United lowers fares.
   a. $C \vee \sim(F \bullet U)$
   b. $C \vee \sim(F \vee U)$
   c. $C \vee (\sim F \vee \sim U)$
   d. $C \supset \sim(F \vee U)$
   e. $\sim(F \vee U) \supset C$

   ANS: B PTS: 2

4. American's hiring pilots is a sufficient condition for both Delta's advertising a sale and Southwest's expanding routes.
   a. $(D \bullet S) \vee A$
   b. $(D \supset A) \bullet (S \supset A)$
   c. $(D \bullet S) \supset A$
   d. $A \supset (D \bullet S)$
   e. $A \equiv (D \bullet S)$

   ANS: D PTS: 2

5. Frontier's improving service is a necessary condition for either Continental's buying planes or United's lowering fares.
   a. $F \equiv (C \vee U)$
   b. $F \supset (C \vee U)$
   c. $(F \supset C) \bullet (F \supset U)$
   d. $(C \vee U) \supset F$
   e. $(C \supset F) \vee (F \supset U)$

ANS: D PTS: 2

6. Southwest expands routes if either American does not hire pilots or United does not lower fares.
   a. $\sim(A \vee U) \supset S$
   b. $(\sim A \bullet \sim U) \supset S$
   c. $S \supset (\sim A \vee \sim U)$
   d. $(S \supset \sim A \vee \sim U)$
   e. $(\sim A \vee \sim U) \supset S$

   ANS: E PTS: 2

7. Continental buys planes if and only if both Delta does not advertise a sale and Southwest does not expand routes.
   a. $C \equiv \sim(D \bullet S)$
   b. $C \supset (\sim D \bullet \sim S)$
   c. $C \equiv (\sim D \bullet \sim S)$
   d. $\sim(D \vee S) \supset C$
   e. $C \vee (\sim D \bullet \sim S)$

   ANS: C PTS: 2

8. United's lowering fares is a sufficient and necessary condition for American's hiring pilots, given that Frontier does not improve service.
   a. $(U \equiv A) \supset \sim F$
   b. $\sim F \supset (U \equiv A)$
   c. $(\sim F \supset U) \bullet (\sim F \supset A)$
   d. $(\sim F \equiv U) \bullet (\sim F \equiv A)$
   e. $\sim F \equiv (U \supset A)$

   ANS: B PTS: 2

9. Continental buys planes if Delta advertises a sale, and Frontier improves service only if Southwest expands routes.
   a. $(D \supset C) \bullet (F \supset S)$
   b. $(D \equiv C) \bullet (F \equiv S)$
   c. $(C \supset D) \bullet (S \supset F)$
   d. $(D \bullet C) \supset (S \bullet F)$
   e. $(C \supset D) \bullet (F \supset S)$

   ANS: A PTS: 2

10. United lowers fares if and only if both Continental buys planes and Delta advertises a sale, provided that American hires pilots.
    a. $(U \equiv A) \bullet (C \equiv D)$
    b. $A \supset [U \equiv (C \bullet D)]$
    c. $[U \equiv (C \bullet D)] \supset A$
    d. $A \supset [(U \supset C) \bullet (D \supset U]$
    e. $[U \supset (C \bullet D)] \supset A$

    ANS: B PTS: 2

Proposition 1H
Given the following proposition:
$[(A \equiv \sim B) \vee (X \supset Y)] \bullet [(Y \supset A) \equiv \sim(X \vee B)]$

11. Given that A and B are true and X and Y are false, determine the truth value of Proposition 1H.
    a. True.
    b. False.

    ANS: B PTS: 2

12. In Proposition 1H, the main operator is a:
    a. Horseshoe.
    b. Tilde.
    c. Dot.
    d. Triple bar.
    e. Wedge.

    ANS: C PTS: 2

Proposition 2H
Given the following proposition:
$\sim[(B \bullet \sim X) \supset \sim(Y \equiv \sim B)] \supset [\sim(X \supset A) \vee (B \supset \sim Y)]$

13. Given that A and B are true and X and Y are false, determine the truth value of Proposition 2H.
    a. True.
    b. False.

    ANS: A PTS: 2

14. In Proposition 2H, the main operator is a:
    a. Dot.
    b. Wedge.
    c. Triple bar.
    d. Tilde.
    e. Horseshoe.

    ANS: E PTS: 2

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 1H
Given the following statement:
$(S \supset \sim R) \supset (\sim S \bullet R)$

15. Statement 1H is:
    a. Consistent.
    b. Logically equivalent.
    c. Tautologous.
    d. Contingent.
    e. Self-contradictory.

    ANS: D PTS: 4

16. The truth table for Statement 1H has how many lines?
    a. Two.
    b. Eight.
    c. Four.

d. Six.
e. Nine.

ANS: C PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 2H
Given the following statement:
$[N \vee \sim (K \vee G)] \equiv [(G \supset N) \bullet (K \supset N)]$

17. Statement 2H is:
    a. Inconsistent.
    b. Contingent.
    c. Consistent.
    d. Self-contradictory.
    e. Tautologous.

    ANS: E PTS: 4

18. The truth table for Statement 2H has how many lines?
    a. Five.
    b. Nine.
    c. Eight.
    d. Six.
    e. Four.

    ANS: C PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

19. Given the statement:
    $(E \vee \sim H) \bullet (H \bullet \sim E)$

    This statement is:
    a. Valid.
    b. Self-contradictory.
    c. Tautologous.
    d. Inconsistent.
    e. Contingent.

    ANS: B PTS: 4

20. Given the pair of statements:
    $G \supset (W \bullet \sim Q)$ and $(W \vee \sim G) \bullet \sim (Q \bullet G)$

    These statements are:
    a. Inconsistent.
    b. Contradictory.
    c. Invalid.
    d. Logically equivalent.
    e. Consistent.

ANS: D PTS: 4

21. Given the pair of statements:
$P \bullet \sim Z$ and $Z \equiv P$

These statements are:
a. Inconsistent.
b. Valid.
c. Contradictory.
d. Consistent.
e. Logically equivalent.

ANS: A PTS: 4

22. Given the argument:
$M \supset J \ / \ \sim J \supset R \ // \ (M \vee \sim R) \supset J$

This argument is:
a. Invalid; fails in 3rd line.
b. Invalid; fails in 2nd line.
c. Invalid; fails in 4th line.
d. Invalid; fails in 1st line.
e. Valid.

ANS: E PTS: 4

23. Given the argument:
$Q \supset A \ / \ \sim(A \bullet Q) \ / \ A \equiv Q$

This argument is:
a. Invalid; fails in 1st line.
b. Valid.
c. Invalid; fails in 3rd line.
d. Invalid; fails in 2nd line.
e. Invalid; fails in 4th line.

ANS: C PTS: 4

INSTRUCTIONS: Use indirect truth tables to answer the following problems.

24. Given the argument:
$R \supset (H \bullet \sim N) \ / \ (H \bullet \sim B) \supset (N \vee \sim P) \ / \ K \supset (G \bullet P) \ // \ (K \bullet R) \supset B$

This argument is:
a. Invalid.
b. Valid.
c. Uncogent.
d. Cogent.
e. Sound.

ANS: B PTS: 4

25. Given the argument:
$S \supset W \ / \ C \supset L \ / \ (M \bullet \sim L) \vee (D \bullet \sim W) \ / \ C \vee S \ // \ D \bullet M$

This argument is:
a. Invalid.
b. Cogent.
c. Sound.
d. Valid.
e. Uncogent.

ANS: A PTS: 4

26. Given the statements:
$H \supset E$ / $M \supset R$ / $(M \bullet E) \supset G$ / $(R \bullet G) \supset E$ / $M \vee E$

These statements are:
a. Invalid.
b. Tautologous.
c. Consistent.
d. Logically equivalent.
e. Inconsistent.

ANS: C PTS: 4

27. Given the statements:
$C \supset L$ / $K \supset \sim H$ / $L \supset (N \supset K)$ / $C \supset (H \supset N)$ / $C \bullet H$

These statements are:
a. Contradictory.
b. Tautologous.
c. Consistent.
d. Inconsistent.
e. Valid.

ANS: D PTS: 4

INSTRUCTIONS: Identify the form of each argument. Those without a specific name are invalid.

28. $B \supset \sim Q$
Q
$\sim B$
a. Modus ponens.
b. Modus tollens.
c. Disjunctive syllogism.
d. Invalid.
e. Denying the antecedent.

ANS: B PTS: 2

29. $(\sim N \supset R) \bullet (F \supset \sim G)$
$F \vee \sim N$
$R \vee \sim G$
a. Constructive dilemma.
b. Invalid.
c. Denying the antecedent.
d. Modus tollens.
e. Destructive dilemma.

ANS: A PTS: 2

30. ~H ⊃ ~B
K ⊃ ~H
K ⊃ ~B
a. Denying the antecedent.
b. Invalid.
c. Pure hypothetical syllogism.
d. Constructive dilemma.
e. Destructive dilemma.

ANS: C PTS: 2

31. D ⊃ ~N
~N
D
a. Affirming the consequent.
b. Invalid.
c. Denying the antecedent.
d. Modus ponens.
e. Modus tollens.

ANS: A PTS: 2

32. S ⊃ ~R
N ⊃ ~R
S ⊃ N
a. Disjunctive syllogism.
b. Constructive dilemma.
c. Pure hypothetical syllogism.
d. Affirming the consequent.
e. Invalid.

ANS: E PTS: 2

33. ~P ∨ M
P
M
a. Modus tollens.
b. Denying the antecedent.
c. Pure hypothetical syllogism.
d. Disjunctive syllogism.
e. Invalid.

ANS: D PTS: 2

34. ~L ⊃ F
L
~F
a. Disjunctive syllogism.
b. Denying the antecedent.
c. Modus tollens.
d. Modus ponens.
e. Invalid.

ANS: B PTS: 2

35. ~G
~G ⊃ A
A
a. Constructive dilemma.
b. Disjunctive syllogism.
c. Modus ponens.
d. Denying the antecedent.
e. Invalid.

ANS: C PTS: 2

36. G ∨ ~T
~T
G
a. Invalid.
b. Disjunctive syllogism.
c. Modus ponens.
d. Affirming the consequent.
e. Modus tollens.

ANS: A PTS: 2

37. (K ⊃ ~A) • (S ⊃ ~D)
A ∨ D
~K ∨ ~S
a. Invalid.
b. Modus tollens.
c. Affirming the consequent.
d. Denying the antecedent.
e. Destructive dilemma.

ANS: E PTS: 2

INSTRUCTIONS: Select the best answer for the following problems.

38. In the expression 'P ∨ Q', 'P' is called:
a. A disjunction.
b. A conjunct.
c. A disjunct.
d. A conjunction.
e. An antecedent.

ANS: C PTS: 2

39. According to De Morgan's rule, ~(P ∨ Q) is logically equivalent to:
a. P ∨ Q
b. ~P ∨ ~Q
c. P • Q
d. ~P • ~Q
e. P ≡ Q

ANS: D PTS: 2

40. If an indirect truth table requiring more than one line is constructed for either an argument or a series of statements and no contradiction is derived on the first line, then:
    a. The argument is valid and the statements are consistent.
    b. The argument is invalid and the statements are consistent.
    c. The argument is valid and the statements are inconsistent.
    d. The argument is invalid and the statements are inconsistent.
    e. The second line of the truth table must be completed.

    ANS: B PTS: 2

41. If a group of statements are inconsistent, this means:
    a. It is not possible for all of them to be true.
    b. All of them are false.
    c. At least one of them is false.
    d. It is possible for all of them to be false.
    e. Exactly one of them is false.

    ANS: A PTS: 2

42. The dot operator is used to translate:
    a. "Either."
    b. "Unless."
    c. "Implies."
    d. "Provided that."
    e. "Moreover."

    ANS: E PTS: 2

Chapter 6 Test I

MULTIPLE CHOICE

INSTRUCTIONS: Select the correct translation for each statement.

1. Hertz runs a sale or both Avis buys new cars and Budget lowers rates.
   a. $H \vee A \bullet B$
   b. $H \vee (A \bullet B)$
   c. $(H \vee A) \bullet B$
   d. $H \bullet (A \vee B)$
   e. $H \bullet A \vee B$

   ANS: B PTS: 2

2. Thrifty lays off workers only if neither National improves efficiency nor Enterprise reorganizes.
   a. $T \supset \sim(N \vee E)$
   b. $\sim(N \vee E) \supset T$
   c. $T \supset (\sim N \vee \sim T)$
   d. $(\sim N \vee \sim E) \supset T$
   e. $T \equiv \sim(N \vee E)$

   ANS: A PTS: 2

3. Budget lowers rates unless Hertz and Thrifty do not overhaul operations.
   a. $B \vee (\sim H \bullet \sim T)$
   b. $B \vee \sim(H \bullet T)$
   c. $B \supset (\sim H \bullet \sim T)$
   d. $(\sim H \bullet \sim T) \supset B$
   e. $(B \vee \sim H) \bullet \sim T$

   ANS: A PTS: 2

4. If National's improving efficiency implies that Enterprise reorganizes, then Avis buys new cars.
   a. $(N \supset E \supset A)$
   b. $N \supset (E \supset A)$
   c. $(N \supset E) \supset A$
   d. $A \supset (N \supset E)$
   e. $(E \supset N) \supset A$

   ANS: C PTS: 2

5. Not both Hertz runs a sale and Thrifty lays off workers if either Avis buys new cars or Budget lowers rates.
   a. $(\sim H \bullet \sim T) \supset (A \vee B)$
   b. $(A \vee B) \supset (\sim H \bullet \sim T)$
   c. $\sim(H \bullet T) \supset (A \vee B)$
   d. $(A \vee B) \supset \sim(H \bullet T)$
   e. $(A \bullet B) \supset \sim(H \vee T)$

   ANS: D PTS: 2

6. National does not improve efficiency or Enterprise does not reorganize, given that Thrifty lays off workers.
   a. $T \supset \sim(N \vee E)$
   b. $(\sim N \vee \sim E) \supset T$
   c. $\sim(N \vee E) \supset T$
   d. $(T \supset \sim N) \vee \sim E$
   e. $T \supset (\sim N \vee \sim E)$

   ANS: E PTS: 2

7. Budget's lowering rates implies that Hertz runs a sale, only if Avis does not buy new cars.
   a. $(B \supset H) \supset \sim A$
   b. $\sim A \supset (B \supset H)$
   c. $(B \supset H) \equiv \sim A$
   d. $(H \supset B) \supset \sim A$
   e. $(B \supset H \supset A)$

   ANS: A PTS: 2

8. Thrifty's laying off workers is a sufficient condition for National's improving efficiency, if Enterprise reorganizes.
   a. $E \supset (N \supset T)$
   b. $(T \supset N) \supset E$
   c. $E \supset (T \supset N)$
   d. $T \supset (N \supset E)$
   e. $E \equiv (T \supset N)$

   ANS: C PTS: 2

9. Hertz's running a sale and Budget's lowering rates are a necessary condition for either Avis's buying new cars or Thrifty's laying off workers.
   a. $(A \bullet T) \supset (H \vee B)$
   b. $(H \bullet B) \supset (A \vee T)$
   c. $(H \bullet B) \vee (A \vee T)$
   d. $(A \vee T) \supset (H \bullet B)$
   e. $(H \bullet B) \equiv (A \vee T)$

   ANS: D PTS: 2

10. National's improving efficiency or Enterprise's reorganizing is a sufficient and necessary condition for Thrifty's laying off workers, provided that Avis buys new cars.
    a. $(N \vee E) \equiv (A \supset T)$
    b. $A \supset [(N \vee E) \equiv T]$
    c. $[(N \vee E) \equiv T] \supset A$
    d. $A \supset [(N \supset E) \bullet (E \supset N)]$
    e. $A \equiv [(N \vee E) \supset T]$

    ANS: B PTS: 2

Proposition 1I
Given the following proposition:
$[(B \equiv \sim Y) \bullet \sim(\sim X \supset A)] \vee [\sim(X \equiv A) \supset (Y \bullet \sim A)]$

11. Given that A and B are true and X and Y are false, determine the truth value of Proposition 1I.

a. True.
b. False.

ANS: B PTS: 2

12. In Proposition 1I, the main operator is a:
a. Dot.
b. Tilde.
c. Horseshoe.
d. Triple bar.
e. Wedge.

ANS: E PTS: 2

Proposition 2I
Given the following proposition:
$[\sim(X \vee B) \equiv (\sim Y \supset \sim X)] \equiv \sim[(A \supset \sim Y) \bullet \sim(\sim X \supset \sim B)]$

13. Given that A and B are true and X and Y are false, determine the truth value of Proposition 2I.
a. True.
b. False.

ANS: A PTS: 2

14. In Proposition 2I, the main operator is a:
a. Tilde.
b. Wedge.
c. Horseshoe.
d. Triple bar.
e. Dot.

ANS: D PTS: 2

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 1I
Given the following statement:
$(G \bullet \sim M) \supset (M \vee G)$

15. Statement 1I is:
a. Consistent.
b. Logically equivalent.
c. Tautologous.
d. Contingent.
e. Self-contradictory.

ANS: C PTS: 4

16. The truth table for Statement 1I has how many lines?
a. Two.
b. Eight.
c. Four.
d. Six.
e. Nine.

ANS: C PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 2I
Given the following statement:
$(L \bullet \sim E) \equiv (E \bullet \sim L)$

17. Statement 2I is:
    a. Self-contradictory.
    b. Tautologous.
    c. Consistent.
    d. Contingent.
    e. Inconsistent.

ANS: D PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

Statement 3I
Given the following statement:
$[K \bullet (P \vee \sim R)] \bullet [K \supset (R \bullet \sim P)]$

18. Statement 3I is:
    a. Valid.
    b. Self-contradictory.
    c. Tautologous.
    d. Inconsistent.
    e. Contingent.

ANS: B PTS: 4

19. The truth table for Statement 3I has how many lines?
    a. Six.
    b. Nine.
    c. Eleven.
    d. Eight.
    e. Four.

ANS: D PTS: 4

INSTRUCTIONS: Use an ordinary truth table to answer the following problems. Construct the truth table as per the instructions in the textbook.

20. Given the pair of statements:
    $R \vee S$ and $S \supset \sim R$

    These statements are:
    a. Inconsistent.
    b. Contradictory.
    c. Invalid.
    d. Logically equivalent.

e. Consistent.

ANS: E PTS: 4

21. Given the pair of statements:
$(H \bullet J) \vee (N \bullet J)$ and $(N \vee H) \supset \sim J$

These statements are:
a. Contradictory.
b. Valid.
c. Logically equivalent.
d. Consistent.
e. Inconsistent.

ANS: A PTS: 4

22. Given the argument:
$K \vee B \ / \ K \equiv (D \vee \sim B) \ // \ K \supset D$

This argument is:
a. Invalid; fails in 1st line.
b. Invalid; fails in 2nd line.
c. Valid.
d. Invalid; fails in 4th line.
e. Invalid; fails in 3rd line.

ANS: D PTS: 4

23. Given the argument:
$S \supset E \ / \ N \supset (\sim S \supset E) \ // \ N \supset E$

This argument is:
a. Invalid; fails in 5th line.
b. Invalid; fails in 6th line.
c. Valid.
d. Invalid; fails in 2nd line.
e. Invalid; fails in 3rd line.

ANS: C PTS: 4

INSTRUCTIONS: Use indirect truth tables to answer the following problems.

24. Given the argument:
$G \supset (N \bullet E) \ / \ H \supset N \ / \ K \supset \sim E \ / \ (H \bullet K) \equiv G$

This argument is:
a. Valid.
b. Invalid.
c. Uncogent.
d. Cogent.
e. Sound.

ANS: B PTS: 4

25. Given the argument:

$J \supset (E \bullet Q)$ / $\sim Q \supset L$ / $(E \vee M) \supset (L \vee \sim Q)$ / $M \vee J$ // L

This argument is:
a. Valid.
b. Invalid.
c. Sound.
d. Cogent.
e. Uncogent.

ANS: A PTS: 4

26. Given the statements:
$W \supset (E \vee \sim G)$ / $A \supset (G \vee \sim E)$ / $H \supset (A \bullet W)$ / $H \bullet E$

These statements are:
a. Inconsistent.
b. Tautologous.
c. Invalid.
d. Logically equivalent.
e. Consistent.

ANS: E PTS: 4

27. Given the statements:
$\sim S \supset D$ / $K \supset S$ / $D \supset K$ / $R \equiv \sim(S \bullet C)$ / $R \equiv C$

These statements are:
a. Contradictory.
b. Tautologous.
c. Consistent.
d. Inconsistent.
e. Valid.

ANS: D PTS: 4

INSTRUCTIONS: Identify the form of each argument. Those without a specific name are invalid.

28. $\sim Q \vee S$
$\sim Q$
S
a. Disjunctive syllogism.
b. Modus ponens.
c. Invalid.
d. Modus tollens.
e. Denying the antecedent.

ANS: C PTS: 2

29. $(M \supset \sim T) \bullet (\sim H \supset T)$
$T \vee \sim T$
$\sim M \vee H$
a. Invalid.
b. Destructive dilemma.
c. Constructive dilemma

d. Modus tollens.
e. Affirming the consequent.

ANS: B PTS: 2

30. K
G ⊃ ~K
~G
a. Disjunctive syllogism.
b. Invalid.
c. Denying the antecedent.
d. Modus tollens.
e. Affirming the consequent.

ANS: D PTS: 2

31. ~G ∨ ~B
B
~G
a. Disjunctive syllogism.
b. Invalid.
c. Denying the antecedent.
d. Affirming the consequent.
e. Modus tollens.

ANS: A PTS: 2

32. F ⊃ ~H
H ⊃ ~T
F ⊃ T
a. Pure hypothetical syllogism.
b. Constructive dilemma.
c. Invalid.
d. Affirming the consequent.
e. Disjunctive syllogism.

ANS: C PTS: 2

33. R
R ⊃ ~D
~D
a. Invalid.
b. Affirming the consequent.
c. Disjunctive syllogism.
d. Modus tollens.
e. Modus ponens.

ANS: E PTS: 2

34. S ⊃ ~C
~C
S
a. Modus tollens.
b. Affirming the consequent.
c. Denying the antecedent.

d. Modus ponens.
e. Invalid.

ANS: B PTS: 2

35. $(\sim W \supset L) \bullet (N \supset \sim R)$
$N \vee \sim W$
$L \vee \sim R$
a. Invalid.
b. Pure hypothetical syllogism.
c. Destructive dilemma.
d. Denying the antecedent.
e. Constructive dilemma.

ANS: E PTS: 2

36. $E \supset \sim T$
$\sim N \supset E$
$\sim N \supset \sim T$
a. Modus ponens.
b. Constructive dilemma.
c. Pure hypothetical syllogism.
d. Invalid.
e. Disjunctive syllogism.

ANS: C PTS: 2

37. $\sim F \supset L$
F
$\sim L$
a. Denying the antecedent.
b. Modus ponens.
c. Affirming the consequent.
d. Modus tollens.
e. Invalid.

ANS: A PTS: 2

INSTRUCTIONS: Select the best answer for the following problems.

38. In the expression 'P • Q', 'P' is called:
a. A conjunction.
b. A disjunct.
c. An antecedent.
d. A conjunct.
e. A disjunction.

ANS: D PTS: 2

39. According to De Morgan's rule, $\sim(P \bullet Q)$ is logically equivalent to:
a. $P \vee Q$
b. $\sim P \bullet \sim Q$
c. $\sim P \vee \sim Q$
d. $P \bullet Q$

e. $P \equiv Q$

ANS: C PTS: 2

40. If a group of statements are consistent, this means:
    a. At least one of them is true.
    b. It is possible for all of them to be true.
    c. At least one of them is false.
    d. All of them are true.
    e. It is possible for all of them to be false.

    ANS: B PTS: 2

41. If an indirect truth table requiring more than one line is constructed for either an argument or a series of statements and a contradiction is derived on the first line, then:
    a. The second line must be completed.
    b. The argument is valid and the statements are consistent.
    c. The argument is valid and the statements are inconsistent.
    d. The argument is invalid and the statements are consistent.
    e. The argument is invalid and the statements are inconsistent.

    ANS: A PTS: 2

42. The wedge operator is used to translate:
    a. "Nevertheless."
    b. "Moreover."
    c. "Unless."
    d. "Implies."
    e. "Provided that."

    ANS: C PTS: 2

Chapter 7 Test A

MULTIPLE CHOICE

INSTRUCTIONS: Select the conclusion that follows in a single step from the given premises.

1. Given the following premises:
   1. $\sim R \equiv \sim R$
   2. $N \bullet \sim T$
   3. $R \supset \sim(N \bullet \sim T)$

   a. $\sim T$ 2, Simp
   b. $(N \bullet \sim T) \supset \sim R$ 3, Trans
   c. $\sim R$ 2, 3, MT
   d. $R \supset (\sim N \vee \sim\sim T)$ 3, DM
   e. $\sim R$ 1, Taut

   ANS: D PTS: 2

2. Given the following premises:
   1. $G \bullet \sim A$
   2. $K \supset (G \bullet \sim A)$
   3. $G \supset M$

   a. $(K \supset G) \supset \sim A$ 2, Exp
   b. $K \supset (\sim A \bullet G)$ 2, Com
   c. $(K \supset G) \bullet \sim A$ 2, Assoc
   d. K 1, 2, MP
   e. M 1, 3, MP

   ANS: B PTS: 2

3. Given the following premises:
   1. $\sim(Q \bullet \sim S)$
   2. $\sim F \supset (Q \bullet \sim S)$
   3. $H \vee (Q \bullet \sim S)$

   a. $(H \bullet Q) \vee (H \bullet \sim S)$ 3, Dist
   b. $\sim Q \vee S$ 1, DM
   c. F 1, 2, MT
   d. H 1, 3, DS
   e. $\sim\sim F$ 1, 2, MT

   ANS: E PTS: 2

4. Given the following premises:
   1. N
   2. $R \supset \sim N$
   3. $\sim C \bullet (T \supset R)$

   a. $\sim C$ 3, Simp
   b. $T \supset \sim N$ 2, 3, HS

c. $(\sim C \bullet T) \supset R$ 3, Assoc
d. $\sim R$ 1, 2, MT
e. $N \supset \sim R$ 2, Trans

ANS: A PTS: 2

5. Given the following premises:
1. $(K \bullet \sim T) \vee (K \bullet \sim H)$
2. $\sim M \supset (K \bullet \sim H)$
3. $\sim(K \bullet \sim H)$

a. $\sim K \vee H$ 3, DM
b. $K \bullet \sim T$ 1, 3, DS
c. $K \bullet (\sim T \vee \sim H)$ 1, Dist
d. M 2, 3, MT
e. $(\sim M \bullet K) \supset \sim H$ 2, Exp

ANS: C PTS: 2

6. Given the following premises:
1. A
2. $G \supset (A \supset \sim L)$
3. $\sim A \vee \sim G$

a. $A \vee G$ 3, DN
b. $(G \supset A) \supset \sim L$ 2, Assoc
c. $\sim L$ 1, 2, MP
d. $\sim G$ 1, 3, DS
e. $G \supset (\sim\sim L \supset \sim A)$ 2, Trans

ANS: E PTS: 2

7. Given the following premises:
1. $(S \supset \sim F) \bullet (\sim F \supset B)$
2. $S \vee \sim F$
3. $\sim F$

a. $S \supset B$ 1, HS
b. $\sim F \vee B$ 1, 2, CD
c. S 2, 3, DS
d. B 1, 3, MP
e. $\sim S$ 1, 3, MT

ANS: B PTS: 2

8. Given the following premises:
1. $N \equiv R$
2. $(N \bullet \sim R) \supset C$
3. N

a. $(N \supset R) \vee (R \supset N)$ 1, Equiv
b. $N \bullet (\sim R \supset C)$ 2, Assoc
c. $C \supset (N \bullet \sim R)$ 2, Com

d. $N \supset (\sim R \supset C)$ 2, Exp
e. R 1, 3, MP

ANS: D PTS: 2

9. Given the following premises:
1. $\sim M \supset S$
2. $\sim M$
3. $(M \vee H) \vee \sim S$

a. H 2, 3, DS
b. $M \vee H$ 3, Simp
c. $M \vee (H \vee \sim S)$ 3, Assoc
d. $\sim S$ 1, 2, MP
e. $M \vee S$ 1, Impl

ANS: C PTS: 2

10. Given the following premises:
1. $(J \bullet \sim N) \vee T$
2. $\sim(J \bullet \sim N)$
3. $\sim T$

a. T 1, 2, DS
b. $\sim J \vee N$ 2, DM
c. $J \bullet \sim N$ 1, 3, DS
d. $J \bullet (\sim N \vee T)$ 1, Assoc
e. $\sim J$ 2, Simp

ANS: A PTS: 2

11. Given the following premises:
1. $\sim U \supset (S \bullet K)$
2. $R \supset (\sim U \bullet \sim U)$
3. $S \equiv \sim U$

a. $(\sim U \bullet S) \supset K$ 1, Exp
b. $R \supset U$ 2, DN
c. $R \supset \sim U$ 2, Taut
d. $R \supset (S \bullet K)$ 1, 2, HS
e. $(S \supset U) \bullet (\sim U \supset \sim S)$ 3, Equiv

ANS: C PTS: 2

12. Given the following premises:
1. $\sim I \vee \sim\sim B$
2. $M \supset \sim I$
3. I

a. $M \supset \sim\sim B$ 1, 2, HS
b. $\sim\sim B$ 1, 3, DS
c. $\sim M$ 2, 3, MT
d. $\sim I \supset M$ 2, Com

e. ~(I • ~B) 1, DM

ANS: E PTS: 2

13. Given the following premises:
    1. ~N • ~F
    2. K ⊃ (N • F)
    3. U ∨ (K • ~N)

    a. ~K 1, 2, MT
    b. (U ∨ K) • ~N 3, Assoc
    c. (K • N) ⊃ F 2, Exp
    d. (U ∨ K) • (U ∨ ~N) 3, Dist
    e. ~(N • F) 1, DM

    ANS: D PTS: 2

14. Given the following premises:
    1. D ⊃ H
    2. ~D
    3. ~(D ∨ S)

    a. ~H 1, 2, MT
    b. ~D ∨ (D ⊃ H) 2, Add
    c. H ⊃ D 1, Com
    d. S 2, 3, DS
    e. ~D ∨ ~S 3, DM

    ANS: B PTS: 2

15. Given the following premises:
    1. A
    2. (A ⊃ ~T) ⊃ ~G
    3. Q ⊃ (A ⊃ ~T)

    a. Q ⊃ (T ⊃ ~A) 3, Trans
    b. (Q ⊃ A) ⊃ ~T 3, Assoc
    c. A ⊃ (~T • ~G) 2, Exp
    d. ~T 1, 3, MP
    e. Q ⊃ ~G 2, 3, HS

    ANS: E PTS: 2

16. Given the following premises:
    1. P • (~H ∨ D)
    2. ~(~P • ~H)
    3. (P ⊃ ~H) • (~P ⊃ H)

    a. P ≡ ~H 3, Equiv
    b. ~H ∨ D 1, Simp
    c. (P • ~H) ∨ D 1, Assoc
    d. P • (H ⊃ D) 1, Impl
    e. P • H 2, DN

ANS: D PTS: 2

17. Given the following premises:
    1. $N \vee C$
    2. $(N \vee C) \supset (F \supset C)$
    3. $\sim C$

    a. $F \supset C$ 1, 2, MP
    b. N 1, 3, DS
    c. $\sim F$ 2, 3, MT
    d. $\sim N$ 1, 3, MT
    e. $\sim C \bullet R$ 3, Add

    ANS: A PTS: 2

18. Given the following premises:
    1. $(S \bullet \sim J) \vee (\sim S \bullet \sim\sim J)$
    2. $S \vee \sim S$
    3. $\sim J \supset P$

    a. S 2, Taut
    b. $\sim J \vee \sim\sim J$ 1, 2, CD
    c. $S \equiv \sim J$ 1, Equiv
    d. $J \vee P$ 3, Impl
    e. $\sim P \supset J$ 3, Trans

    ANS: C PTS: 2

19. Given the following premises:
    1. $Q \supset (A \vee \sim T)$
    2. T
    3. $A \vee \sim T$

    a. $Q \supset (\sim\sim A \vee \sim T)$ 1, DN
    b. $(A \vee \sim T) \supset Q$ 1, Com
    c. $(Q \supset A) \vee \sim T$ 1, Assoc
    d. Q 1, 3, MP
    e. A 2, 3, DS

    ANS: A PTS: 2

20. Given the following premises:
    1. $\sim E \supset P$
    2. $\sim P$
    3. $\sim(P \vee \sim H)$

    a. $\sim H$ 2, 3, DS
    b. $\sim P \bullet \sim(P \vee \sim H)$ 2, 3, Conj
    c. $\sim P \bullet H$ 3, DM
    d. E 1, 2, MT
    e. $\sim P \supset E$ 1, Trans

    ANS: B PTS: 2

PROBLEM

INSTRUCTIONS: Use natural deduction to derive the conclusion in each problem.

1. Use an ordinary proof (not conditional or indirect proof):
   1. $G \supset (H \supset K)$
   2. $(H \vee \sim M) \supset \sim K$
   3. H / $\sim G$

   ANS:
   Answer not provided

   PTS: 10

2. Use an ordinary proof (not conditional or indirect proof):
   1. $\sim N \supset (\sim R \supset C)$
   2. $R \supset N$
   3. $\sim C$ / N

   ANS:
   Answer not provided

   PTS: 10

3. Use an ordinary proof (not conditional or indirect proof):
   1. $K \supset L$
   2. $\sim K \vee F$
   3. $(L \bullet F) \supset A$
   4. $\sim A$ / $\sim K$

   ANS:
   Answer not provided

   PTS: 10

4. Use conditional proof:
   1. $G \supset (E \supset N)$
   2. $H \supset (\sim N \supset E)$ / $G \supset (H \supset N)$

   ANS:
   Answer not provided

   PTS: 10

5. Use indirect proof:
   1. $S \supset (R \bullet \sim T)$
   2. $(S \bullet R) \supset (T \vee E)$
   3. $(Q \vee \sim T) \supset \sim E$ / $\sim S$

   ANS:

Answer not provided

PTS: 10

6. Use natural deduction to prove the following logical truth:
$[F \bullet (D \supset \sim F)] \supset (D \supset A)$

ANS:
Answer not provided

PTS: 10

Chapter 7 Test B

MULTIPLE CHOICE

INSTRUCTIONS: Select the conclusion that follows in a single step from the given premises.

1. Given the following premises:
   1. $\sim\sim N$
   2. $K \supset \sim N$
   3. $\sim N \vee (K \bullet S)$

   a. $(\sim N \vee K) \bullet S$ 3, Assoc
   b. K 1, 2, MT
   c. $N \supset \sim K$ 2, Trans
   d. $K \bullet S$ 1, 3, DS
   e. $(\sim N \bullet K) \vee (\sim N \bullet S)$ 3, Dist

   ANS: D PTS: 2

2. Given the following premises:
   1. $Q \supset (H \bullet \sim F)$
   2. $\sim(Q \bullet \sim M)$
   3. $\sim G \supset (Q \bullet \sim M)$

   a. $G \vee \sim(Q \bullet M)$ 2, Add
   b. Q 2, Simp
   c. $\sim Q \vee \sim\sim M$ 2, DM
   d. $Q \supset \sim(\sim H \vee F)$ 1, DM
   e. G 2, 3, MT

   ANS: C PTS: 2

3. Given the following premises:
   1. $(S \supset R) \supset (J \supset T)$
   2. $(P \supset R) \supset (S \supset R)$
   3. $R \supset J$

   a. $(P \supset R) \supset (J \supset T)$ 1, 2, HS
   b. $S \supset J$ 1, 3, HS
   c. $P \supset J$ 2, 3, HS
   d. $(S \supset R) \bullet (P \supset R)$ 1, 2, Conj
   e. $R \supset T$ 1, 3, HS

   ANS: A PTS: 2

4. Given the following premises:
   1. $Q \supset (H \bullet L)$
   2. $H \supset \sim Q$
   3. $L \supset \sim Q$

   a. $(Q \supset H) \supset L$ 1, Exp
   b. $L \supset (H \bullet L)$ 1, 3, HS

c. $Q \supset \sim Q$ 1, 3, HS
d. $H \supset L$ 2, 3, HS
e. $(L \supset \sim Q) \bullet (H \supset \sim Q)$ 2, 3, Conj

ANS: E PTS: 2

5. Given the following premises:
1. $F \supset J$
2. $A \supset (F \bullet J)$
3. $A \bullet (Q \vee N)$

a. $J \supset F$ 1, Com
b. $A \bullet (N \vee Q)$ 3, Com
c. $A \supset J$ 1, 2, HS
d. $(A \supset F) \bullet (A \supset J)$ 2, Dist
e. $(A \bullet Q) \vee N$ 3, Assoc

ANS: B PTS: 2

6. Given the following premises:
1. $\sim D \vee \sim T$
2. $D \vee (\sim T \bullet \sim R)$
3. D

a. $(D \vee \sim T) \bullet (D \vee \sim R)$ 2, Dist
b. $(D \vee \sim T) \bullet R$ 2, Assoc
c. $D \vee T$ 1, DN
d. $\sim T$ 1, 3, DS
e. $\sim T \bullet \sim R$ 2, 3, DS

ANS: A PTS: 2

7. Given the following premises:
1. $(C \bullet \sim F) \supset E$
2. $G \vee (C \bullet \sim F)$
3. $\sim(C \bullet \sim F)$

a. $G \supset E$ 1, 2, HS
b. C 1, Simp
c. $C \supset (\sim F \supset E)$ 1, Exp
d. $(G \vee C) \bullet \sim F$ 2, Assoc
e. G 2, 3, DS

ANS: C PTS: 2

8. Given the following premises:
1. $K \vee \sim H$
2. $(K \vee \sim H) \supset (B \supset J)$
3. $J \supset D$

a. $H \supset K$ 1, Impl
b. $B \supset D$ 2, 3, HS
c. K 1, Simp

d. $D \supset J$ 3, Trans
e. $B \supset J$ 1, 2, MP

ANS: E PTS: 2

9. Given the following premises:
1. $R \bullet \sim S$
2. $R \supset \sim(S \bullet \sim F)$
3. $\sim S \supset (F \bullet N)$

a. $(\sim S \bullet F) \supset N$ 3, Exp
b. $\sim S$ 1, Simp
c. $F \bullet N$ 1, 3, MP
d. $R \supset (\sim S \vee \sim\sim F)$ 2, DM
e. $(\sim S \supset F) \bullet (\sim S \supset N)$ 3, Dist

ANS: D PTS: 2

10. Given the following premises:
1. $\sim T \supset E$
2. $\sim K \supset (\sim T \vee \sim T)$
3. $M \supset (\sim K \vee \sim L)$

a. $(M \supset \sim K) \vee L$ 3, Assoc
b. $M \supset (K \supset \sim L)$ 3, Impl
c. $M \supset (K \vee L)$ 3, DN
d. $\sim K \supset T$ 2, Taut
e. $\sim K \supset E$ 1, 2, HS

ANS: B PTS: 2

11. Given the following premises:
1. $\sim R \vee \sim R$
2. $R \vee (\sim J \bullet \sim H)$
3. $\sim R \supset (H \bullet B)$

a. $\sim J \bullet \sim H$ 1, 2, DS
b. R 1, DN
c. $R \vee \sim(J \vee H)$ 2, DM
d. $(R \vee \sim J) \bullet \sim H$ 2, Assoc
e. $H \bullet B$ 1, 3, MP

ANS: C PTS: 2

12. Given the following premises:
1. $(F \bullet \sim M) \supset (L \bullet \sim G)$
2. $P \supset L$
3. $\sim(L \bullet \sim G)$

a. $\sim(F \bullet \sim M)$ 1, 3, MT
b. $\sim L$ 3, Simp
c. $\sim P$ 2, 3, MT
d. $\sim L \vee G$ 3, DM

e. $L \supset P$ 2, Trans

ANS: A PTS: 2

13. Given the following premises:
    1. $S \supset (\sim\sim T \bullet \sim\sim C)$
    2. $(S \bullet Q) \vee C$
    3. $\sim C$

    a. S 2, Simp
    b. $S \supset (T \bullet C)$ 1, DN
    c. $S \supset \sim\sim T$ 1, Simp
    d. $S \supset (T \bullet \sim\sim C)$ 1, DN
    e. $S \bullet Q$ 2, 3, DS

    ANS: D PTS: 2

14. Given the following premises:
    1. $(\sim H \bullet \sim J) \supset K$
    2. $\sim(\sim H \bullet \sim J)$
    3. $(\sim H \bullet N) \vee (\sim H \bullet \sim J)$

    a. $(\sim H \bullet N) \supset K$ 1, 3, HS
    b. $\sim H \bullet N$ 2, 3, DS
    c. $H \vee J$ 2, DM
    d. $\sim H \supset (J \supset K)$ 1, Exp
    e. $\sim H \bullet (N \vee \sim J)$ 3, Dist

    ANS: E PTS: 2

15. Given the following premises:
    1. $R \supset (\sim B \supset F)$
    2. $\sim U \supset B$
    3. $\sim B$

    a. F 1, 3, MP
    b. $(R \supset \sim B) \supset F$ 1, Assoc
    c. $R \supset (\sim F \supset \sim\sim B)$ 1, Trans
    d. U 2, 3, MT
    e. $\sim B \supset U$ 2, Trans

    ANS: C PTS: 2

16. Given the following premises:
    1. $T \vee S$
    2. $A \supset T$
    3. $A \bullet (\sim T \bullet S)$

    a. $\sim T$ 3, Simp
    b. $(A \bullet \sim T) \bullet S$ 3, Assoc
    c. T 2, 3, MP
    d. $T \supset A$ 2, Com
    e. S 1, 3, DS

ANS: B PTS: 2

17. Given the following premises:
    1. ~P
    2. $L \supset (P \vee M)$
    3. $(P \bullet M) \supset (\sim R \vee \sim R)$

    a. $(P \bullet M) \supset \sim R$ 3, Taut
    b. P 3, Simp
    c. $L \supset (\sim R \vee \sim R)$ 2, 3, HS
    d. $(L \supset P) \vee (L \supset M)$ 2, Dist
    e. M 1, 2, DS

    ANS: A PTS: 2

18. Given the following premises:
    1. $\sim N \vee H$
    2. $Q \supset \sim(\sim N \vee H)$
    3. $(\sim N \supset Q) \bullet (H \supset Q)$

    a. $Q \supset (N \bullet \sim H)$ 2, DM
    b. $H \supset Q$ 3, Simp
    c. ~Q 1, 2, MT
    d. $\sim N \supset \sim(\sim N \vee H)$ 2, 3, HS
    e. $Q \vee Q$ 1, 3, CD

    ANS: E PTS: 2

19. Given the following premises:
    1. $R \supset (E \bullet D)$
    2. $R \bullet \sim G$
    3. $\sim E \supset G$

    a. ~G 2, Simp
    b. $E \bullet D$ 1, 2, MP
    c. $\sim\sim E$ 2, 3, MT
    d. $(R \bullet \sim G) \vee F$ 2, Add
    e. $E \vee G$ 3, Impl

    ANS: D PTS: 2

20. Given the following premises:
    1. $(L \supset M) \bullet (F \supset J)$
    2. $M \supset \sim(F \vee L)$
    3. $F \vee L$

    a. $L \supset \sim(F \vee L)$ 1, 2, HS
    b. $M \vee J$ 1, 3, CD
    c. $L \supset M$ 1, Simp
    d. ~M 2, 3, MT
    e. $M \supset (\sim F \vee \sim L)$ 2, DM

    ANS: C PTS: 2

PROBLEM

INSTRUCTIONS: Use natural deduction to derive the conclusion in each problem.

1. Use an ordinary proof (not conditional or indirect proof):
   1. $E \supset (S \supset T)$
   2. $(\sim L \bullet M) \supset (S \bullet E)$
   3. $\sim(T \vee L)$ / $\sim M$

   ANS:
   Answer not provided

   PTS: 10

2. Use an ordinary proof (not conditional or indirect proof):
   1. $S \supset (K \bullet F)$
   2. $F \supset (G \bullet H)$ / $S \supset H$

   ANS:
   Answer not provided

   PTS: 10

3. Use an ordinary proof (not conditional or indirect proof):
   1. $A \supset (Q \vee R)$
   2. $(R \bullet Q) \supset B$
   3. $A \bullet \sim B$ / $R \equiv \sim Q$

   ANS:
   Answer not provided

   PTS: 10

4. Use conditional proof:
   1. $N \supset (F \bullet A)$
   2. $B \supset (R \bullet F)$ / $(N \vee B) \supset (A \vee R)$

   ANS:
   Answer not provided

   PTS: 10

5. Use indirect proof:
   1. $(R \vee S) \supset (H \bullet \sim G)$
   2. $(K \vee R) \supset (G \vee \sim H)$ / $\sim R$

   ANS:
   Answer not provided

   PTS: 10

6. Use natural deduction to prove the following logical truth:
   $[(P \vee Q) \supset (R \bullet T)] \supset (P \supset R)$

   ANS:
   Answer not provided

   PTS: 10

Chapter 7 Test C

MULTIPLE CHOICE

INSTRUCTIONS: Select the conclusion that follows in a single step from the given premises.

1. Given the following premises:
   1. $C \supset (\sim L \vee \sim N)$
   2. $(C \bullet L) \supset \sim N$
   3. N

   a. $\sim(C \bullet L)$ 2, 3, MT
   b. $(C \supset \sim L) \vee \sim N$ 1, Assoc
   c. $(C \supset \sim N) \bullet (L \supset \sim N)$ 2, Dist
   d. $C \supset \sim N$ 2, Simp
   e. $C \supset \sim(L \bullet N)$ 1, DM

   ANS: E PTS: 2

2. Given the following premises:
   1. $D \supset (\sim A \vee \sim A)$
   2. $\sim A \supset (R \bullet M)$
   3. $\sim R \bullet \sim M$

   a. $D \supset \sim A$ 1, Taut
   b. $D \supset A$ 1, DN
   c. $D \supset (R \bullet M)$ 1, 2, HS
   d. $\sim\sim A$ 2, 3, MT
   e. $\sim(R \bullet M)$ 3, DM

   ANS: A PTS: 2

3. Given the following premises:
   1. $P \supset L$
   2. $\sim(J \bullet O)$
   3. $(L \supset A) \supset (J \bullet O)$

   a. $L \supset P$ 1, Com
   b. $\sim J \bullet \sim O$ 2, DM
   c. $P \supset A$ 1, 3, HS
   d. $\sim(L \supset A)$ 2, 3, MT
   e. $\sim J$ 2, Simp

   ANS: D PTS: 2

4. Given the following premises:
   1. $E \supset (B \bullet J)$
   2. $(J \bullet B) \supset \sim L$
   3. L

   a. $E \supset \sim L$ 1, 2, HS
   b. $\sim(J \bullet B)$ 2, 3, MT

c. $(B \bullet J) \supset \sim L$ 2, Com
d. J 2, Simp
e. $(E \supset B) \bullet (E \supset J)$ 1, Dist

ANS: C PTS: 2

5. Given the following premises:
   1. $F \vee S$
   2. $\sim S$
   3. $(S \supset W) \bullet (F \supset N)$

   a. F 1, 2, DS
   b. $S \supset W$ 3, Simp
   c. $\sim F \supset S$ 1, Impl
   d. $F \supset N$ 3, Simp
   e. $W \vee N$ 1, 3, CD

   ANS: B PTS: 2

6. Given the following premises:
   1. $(E \supset K) \vee W$
   2. $\sim W$
   3. $W \vee \sim(Q \supset E)$

   a. $E \supset K$ 1, 2, DS
   b. $Q \supset K$ 1, 3, HS
   c. $\sim(Q \supset E)$ 2, 3, DS
   d. $E \supset (K \vee W)$ 1, Assoc
   e. $W \vee (\sim Q \supset \sim E)$ 3, DM

   ANS: C PTS: 2

7. Given the following premises:
   1. E
   2. $R \supset \sim E$
   3. $N \supset (\sim C \supset R)$

   a. $\sim R$ 1, 2, MT
   b. $E \bullet H$ 1, Add
   c. $\sim C \supset \sim E$ 2, 3, HS
   d. $E \supset \sim R$ 2, Trans
   e. $(N \bullet \sim C) \supset R$ 3, Exp

   ANS: E PTS: 2

8. Given the following premises:
   1. $\sim(G \bullet F)$
   2. $\sim F \supset H$
   3. $(G \supset \sim F) \bullet (\sim F \supset G)$

   a. $\sim F \supset G$ 3, Simp
   b. $G \supset H$ 2, 3, HS
   c. $F \vee H$ 2, Impl

d. $G \equiv \sim F$ 3, Equiv
e. $\sim G$ 1, Simp

ANS: D PTS: 2

9. Given the following premises:
1. $(G \supset A) \vee T$
2. G
3. $\sim T$

a. A 1, 2, MP
b. $G \bullet \sim T$ 2, 3, Conj
c. $G \supset A$ 1, 3, DS
d. $G \supset (A \vee T)$ 1, Assoc
e. $G \supset (A \supset T)$ 1, Exp

ANS: B PTS: 2

10. Given the following premises:
1. $Q \supset (\sim N \vee \sim N)$
2. $\sim N \supset \sim\sim P$
3. $P \supset \sim G$

a. $\sim N \supset P$ 2, DN
b. $Q \supset \sim\sim P$ 1, 2, HS
c. $N \vee P$ 2, Impl
d. $\sim N \supset \sim G$ 2, 3, HS
e. $G \supset \sim P$ 3, Trans

ANS: A PTS: 2

11. Given the following premises:
1. $T \supset (G \vee G)$
2. $\sim P \supset T$
3. $F \supset (B \supset \sim P)$

a. $F \supset (P \supset \sim B)$ 3, Trans
b. $(F \supset B) \supset \sim P$ 3, Assoc
c. $F \supset (\sim B \vee \sim P)$ 3, Impl
d. $B \supset T$ 2, 3, HS
e. $\sim P \supset G$ 1, 2, HS

ANS: C PTS: 2

12. Given the following premises:
1. $C \supset (H \bullet M)$
2. $(T \supset S) \supset C$
3. T

a. $(C \supset H) \bullet M$ 1, Assoc
b. $T \supset (S \bullet C)$ 2, Exp
c. $(C \supset H) \bullet (C \supset M)$ 1, Dist
d. S 2, 3, MP

e. $(T \supset S) \supset (H \bullet M)$ 1, 2, HS

ANS: E PTS: 2

13. Given the following premises:
    1. $\sim W$
    2. $C \vee W$
    3. $R \supset \sim(C \vee W)$

    a. $R \supset (\sim C \bullet \sim W)$ 3, DM
    b. $\sim R$ 2, 3, MT
    c. C 1, 2, DS
    d. $(C \vee W) \supset \sim R$ 3, Trans
    e. $\sim C \supset W$ 2, Impl

    ANS: A PTS: 2

14. Given the following premises:
    1. B
    2. $\sim R \supset K$
    3. $B \supset (K \supset E)$

    a. $(B \supset K) \supset E$ 3, Assoc
    b. $\sim R \supset E$ 2, 3, HS
    c. $R \vee K$ 2, Impl
    d. $K \supset E$ 1, 3, MP
    e. $B \bullet N$ 1, Add

    ANS: D PTS: 2

15. Given the following premises:
    1. $\sim A \supset \sim S$
    2. $E \supset (\sim Q \supset \sim A)$
    3. $\sim Q$

    a. $\sim A$ 2, 3, MP
    b. $(E \supset \sim Q) \supset \sim A$ 2, Assoc
    c. $E \supset (A \supset Q)$ 2, Trans
    d. $\sim Q \supset \sim S$ 1, 2, HS
    e. $A \vee \sim S$ 1, Impl

    ANS: C PTS: 2

16. Given the following premises:
    1. $\sim(F \bullet J)$
    2. $\sim F$
    3. $(F \bullet H) \vee (F \bullet J)$

    a. $F \bullet H$ 1, 3, DS
    b. $F \bullet (H \vee J)$ 3, Dist
    c. $F \vee (H \bullet J)$ 3, Dist
    d. $\sim F \bullet \sim J$ 1, DM
    e. F 3, Simp

ANS: B PTS: 2

17. Given the following premises:
    1. $H \vee M$
    2. $E \supset \sim(H \vee M)$
    3. $(H \supset D) \bullet (M \supset O)$

    a. $\sim H \supset M$ 1, Impl
    b. $\sim E$ 1, 2, MT
    c. H 1, Simp
    d. $M \supset O$ 3, Simp
    e. $D \vee O$ 1, 3, CD

    ANS: E PTS: 2

18. Given the following premises:
    1. $N \supset \sim(S \vee K)$
    2. $S \vee K$
    3. $S \supset (R \bullet Q)$

    a. S 2, Simp
    b. $(S \vee K) \vee N$ 2, Add
    c. $\sim S \supset K$ 2, Impl
    d. $\sim N$ 1, 2, MT
    e. $(S \supset R) \supset Q$ 3, Exp

    ANS: B PTS: 2

19. Given the following premises:
    1. $\sim(\sim H \bullet J)$
    2. $K \vee (\sim H \bullet J)$
    3. $(M \vee M) \supset (\sim H \bullet J)$

    a. $(K \vee \sim H) \bullet (K \vee \sim J)$ 2, Dist
    b. $\sim K \supset (\sim H \bullet J)$ 2, Impl
    c. K 1, 2, DS
    d. $H \vee \sim J$ 1, DM
    e. $\sim M$ 1, 3, MT

    ANS: A PTS: 2

20. Given the following premises:
    1. $S \vee (\sim Q \vee \sim C)$
    2. $(\sim Q \vee \sim C) \supset M$
    3. $T \supset (Q \bullet C)$

    a. $S \supset M$ 1, 2, HS
    b. $S \vee \sim(Q \vee C)$ 1, DM
    c. $(S \vee \sim Q) \vee C$ 1, Assoc
    d. $\sim Q \vee (\sim C \supset M)$ 2, Assoc
    e. $(T \supset Q) \bullet (T \supset C)$ 3, Dist

    ANS: C PTS: 2

PROBLEM

INSTRUCTIONS: Use natural deduction to derive the conclusion in each problem.

1. Use an ordinary proof (not conditional or indirect proof):
   1. $K \vee (S \bullet N)$
   2. $\sim(K \bullet \sim Q)$
   3. $\sim(N \bullet \sim Q)$ / Q

   ANS:
   Answer not provided

   PTS: 10

2. Use an ordinary proof (not conditional or indirect proof):
   1. $M \supset (R \bullet E)$
   2. $(E \vee H) \supset G$ / $M \supset G$

   ANS:
   Answer not provided

   PTS: 10

3. Use an ordinary proof (not conditional or indirect proof):
   1. $F \supset (J \vee \sim F)$
   2. $J \supset (L \vee \sim J)$ / $F \supset L$

   ANS:
   Answer not provided

   PTS: 10

4. Use conditional proof:
   1. $S \supset (B \supset T)$
   2. $N \supset (T \supset \sim B)$ / $(S \bullet N) \supset \sim B$

   ANS:
   Answer not provided

   PTS: 10

5. Use indirect proof:
   1. $(P \vee F) \supset (A \vee D)$
   2. $A \supset (M \bullet \sim P)$
   3. $D \supset (C \bullet \sim P)$ / $\sim P$

   ANS:
   Answer not provided

   PTS: 10

6. Use natural deduction to prove the following logical truth:
   $(P \supset Q) \equiv [P \supset (Q \vee \sim P)]$

   ANS:
   Answer not provided

   PTS: 10

Chapter 8 Test A

MULTIPLE CHOICE

INSTRUCTIONS: Select the correct translation for each statement.

1. If either Ann or Charlie wins the lottery, then George will celebrate.
   a. $(x)(Ax \vee Cx) \supset Gx$
   b. $(Wa \vee Wc) \supset Cg$
   c. $(Wa \bullet Wc) \supset Cg$
   d. $(\exists x)[(Ax \vee Cx) \bullet Gx]$
   e. $(x)[(Wa \vee Wc) \supset Cg]$

   ANS: B PTS: 2

2. There is a lamp in the bedroom.
   a. $(\exists x)(Lx \supset Bx)$
   b. $(x)(Lx \supset Bx)$
   c. $(x)(Lx \bullet Bx)$
   d. $(\exists x)(Lx \bullet Bx)$
   e. $(\exists x)Lx \bullet (\exists x)Bx$

   ANS: D PTS: 2

3. A raccoon is not a mongoose.
   a. $(x)(Rx \supset \sim Mx)$
   b. $\sim(x)Rx \supset Mx$
   c. $(x)Rx \supset \sim(x)Mx$
   d. $(\exists x)(Rx \bullet \sim Mx)$
   e. $Rx \bullet \sim Mx$

   ANS: A PTS: 2

4. A small bird landed on the roof.
   a. $(x)[Sx \supset (Bx \supset Lx)]$
   b. $(x)[(Sx \bullet Bx) \supset Lx]$
   c. $(\exists x)(Sx \bullet Bx) \bullet (\exists x)Lx$
   d. $(\exists x)[(Sx \bullet Bx) \bullet (y)Ly]$
   e. $(\exists x)[(Sx \bullet Bx) \bullet Lx]$

   ANS: E PTS: 2

5. Not every model is emaciated.
   a. $(x)(Mx \supset \sim Ex)$
   b. $(x)\sim(Mx \supset Ex)$
   c. $(\exists x)(Mx \bullet \sim Ex)$
   d. $\sim(\exists x)(Mx \bullet Ex)$
   e. $(\exists x)(Mx \bullet Ex)$

   ANS: C PTS: 2

6. Every book in the library is misplaced or checked out.

a. $(x)[(Bx \bullet Lx) \supset (Mx \vee Cx)]$
b. $(x)[(Bx \supset Mx) \bullet (Lx \supset Cx)]$
c. $(x)[(Bx \supset Lx) \supset (Mx \vee Cx)]$
d. $(x)[(Bx \bullet Lx) \bullet (Mx \vee Cx)]$
e. $(x)[(Bx \vee Lx) \supset (Mx \bullet Cx)]$

ANS: A PTS: 2

7. None but the experienced drivers are cautious and safe.
a. $(x)\{Dx \supset [Ex \supset (Cx \bullet Sx)]\}$
b. $(x)[(Ex \bullet Dx) \supset (Cx \bullet Sx)]$
c. $(x)[(Cx \bullet Sx) \supset (Ex \bullet Dx)]$
d. $(x)\{Dx \supset [(Cx \bullet Sx) \supset Ex]\}$
e. $(\exists x)[(Dx \bullet Cx) \supset (Ex \bullet Sx)]$

ANS: D PTS: 2

8. Goats and sheep are contented only if they are not hungry.
a. $(x)[(Gx \bullet Sx) \supset (\sim Hx \supset Cx)]$
b. $(x)[(Gx \vee Sx) \supset (\sim Hx \supset Cx)]$
c. $(x)\{\sim Hx \supset [(Gx \vee Sx) \supset Cx]\}$
d. $(x)[(Gx \bullet Sx) \supset (Cx \supset \sim Hx)]$
e. $(x)[(Gx \vee Sx) \supset (Cx \supset \sim Hx)]$

ANS: E PTS: 2

9. Large diamonds are costly if they are not flawed.
a. $(\exists x)\{\sim Fx \supset [Lx \supset (Dx \bullet Cx)]\}$
b. $(x)[(Lx \bullet Dx) \supset (\sim Fx \supset Cx)]$
c. $(x)[(Lx \vee Dx) \supset (\sim Fx \supset Cx)]$
d. $(x)[(Dx \bullet Cx) \supset (\sim Fx \supset Lx)]$
e. $(x)[(\sim Fx \supset Cx) \supset (Lx \bullet Dx)]$

ANS: B PTS: 2

10. Every accountant will be dismissed if any of the books has been fixed.
a. $(x)(Ax \supset Dx) \supset (\exists x)(Bx \bullet Fx)$
b. $(x)[Bx \bullet Fx \supset (Ax \supset Dx)]$
c. $(x)[(Bx \bullet Fx) \supset (Ax \supset Dx)]$
d. $(\exists x)(Bx \bullet Fx) \supset (x)(Ax \supset Dx)$
e. $(\exists x)[(Bx \bullet Fx) \supset (x)(Ax \supset Dx)]$

ANS: D PTS: 2

11. If all the landscapers are competent, then if none of the roses die, then they will get a bonus.
a. $(\exists x)(Lx \bullet Cx) \supset [(y)(Ry \supset \sim Dy) \supset Gx]$
b. $(x)\{(Lx \bullet Cx) \supset [(y)(Ry \supset \sim Dy) \supset Gx]\}$
c. $(x)\{(Lx \supset Cx) \supset [(y)(Ry \supset \sim Dy) \supset Gx]\}$
d. $(x)(Lx \supset Cx) \supset [(y)(Ry \supset \sim Dy) \supset Gx]$
e. $(x)(Lx \supset Cx) \supset (y)[(Ry \supset \sim Dy) \supset Gy]$

ANS: C PTS: 2

12. Melinda read a novel.

a. $(\exists x)(Nx \bullet Rmx)$
b. $(\exists x)Nx \bullet (\exists x)Rmx$
c. $(x)(Nx \supset Rmx)$
d. Rmn
e. $(\exists x)[(Nx \bullet Rx) \bullet Mx]$

ANS: A PTS: 2

13. A few athletes excel in every sport.
a. $(\exists x)[Ax \bullet (Sx \supset Ex)]$
b. $(\exists x)[Ax \bullet (y)(Sy \supset Exy)]$
c. $(x)[Ax \supset (y)(Sy \supset Exy)]$
d. $(\exists x)[Ax \bullet (y)Sy \supset Exy]$
e. $(\exists x)Ax \bullet (y)(Sy \supset Exy)$

ANS: B PTS: 2

14. Some musicians can play every tune they hear.
a. $(\exists x)Mx \bullet [(y)(Ty \bullet Hxy) \supset Pxy]$
b. $(\exists x)[Mx \bullet (y)(Ty \bullet Hxy) \supset Pxy]$
c. $(x)Tx \supset (\exists y)[(My \bullet Hyx) \supset Pyx]$
d. $(x)\{Mx \supset [(y)(Ty \bullet Hxy) \supset Pxy]\}$
e. $(\exists x)\{Mx \bullet [(y)(Ty \bullet Hxy) \supset Pxy]\}$

ANS: E PTS: 2

15. Every person dislikes someone or other.
a. $(x)Px \supset (\exists y)(Py \bullet Dxy)$
b. $(\exists x)[Px \bullet (y)(Py \bullet Dxy)]$
c. $(x)[Px \supset (\exists y)(Py \bullet Dxy)]$
d. $(\exists x)[Px \bullet (\exists y)(Py \bullet Dxy)]$
e. $(x)[Px \supset (\exists y)Py \bullet Dxy]$

ANS: C PTS: 2

16. Susan's mother is Chris Campbell.
a. $(\exists x)(Mxs \bullet x = c)$
b. $(\exists x)\{Mxs \bullet (y)[(Mys \supset y = x) \supset x = c]\}$
c. $(x)(Mxs \supset x = c)$
d. $(\exists x)[Mxs \bullet (y)(Mys \supset y = x) \bullet x = c]$
e. $(x)\{Mxs \supset (y)[(Mys \supset y = x) \bullet x = c]\}$

ANS: D PTS: 2

17. There are exactly two cars in the lot.
a. $(\exists x)(\exists y)\{Cx \bullet Lx \bullet Cy \bullet Ly \bullet x \neq y \bullet (z)[(Cz \bullet Lz) \supset (z = x \vee z = y)\}$
b. $(\exists x)(\exists y)(Cx \bullet Lx \bullet Cy \bullet Ly \bullet x \neq y)$
c. $(x)(\exists y)\{Cx \bullet Lx \bullet Cy \bullet Ly \bullet x \neq y \bullet (z)[(Cz \bullet Lz) \supset (z = x \vee z = y)\}$
d. $(\exists x)(\exists y)(\exists z)\{Cx \bullet Lx \bullet Cy \bullet Ly \bullet x \neq y \bullet [(Cz \bullet Lz) \supset (z = x \vee z = y)\}$
e. $(x)(y)\{[Cx \bullet Lx \bullet Cy \bullet Ly \bullet x \neq y] \supset (z)[(Cz \bullet Lz) \supset (z = x \vee z = y)\}$

ANS: A PTS: 2

18. Evans is the fastest runner on the team.

a. $Re \bullet Te \bullet (\exists x)(Rx \bullet Tx \bullet x \neq e \bullet Fex]$
b. $Re \bullet Te \bullet (x)[(Rx \bullet Tx \bullet x \neq e) \supset Fex]$
c. $(x)[(Rx \bullet Tx) \supset Fex]$
d. $Re \bullet Te \bullet (x)[(Rx \bullet Tx) \supset Fex]$
e. $Re \bullet Te \bullet (x)[(Rx \bullet Tx \bullet x = e) \supset Fex]$

ANS: B PTS: 2

19. Every player except Michael is healthy.
a. $Pm \bullet \sim Hm \bullet (\exists x)(Px \bullet x \neq m \bullet Hx)$
b. $Pm \bullet \sim Hm \bullet (x)(Px \bullet x \neq m \supset Hx)$
c. $Pm \bullet \sim Hm \bullet (x)[(Px \bullet x \neq m) \supset Hx]$
d. $(x)(Px \bullet \sim Hx \bullet x \neq m) \supset \sim Hm$
e. $(\exists x)(Px \bullet \sim Hx \bullet x \neq m) \supset (Pm \bullet \sim Hm)$

ANS: C PTS: 2

20. Nancy and Raquel will conduct the experiment only if all the young physicists are busy.
a. $(Cn \bullet Cr) \supset (x)[Bx \supset (Yx \bullet Px)]$
b. $(\exists x)\{Cn \bullet Cr \bullet [(Yx \bullet Px) \supset Bx]\}$
c. $(x)[(Yx \bullet Px) \supset Bx] \supset (Cn \bullet Cr)$
d. $Nc \bullet Rc \bullet (x)[(Yx \bullet Px) \supset Bx]$
e. $(Cn \bullet Cr) \supset (x)[(Yx \bullet Px) \supset Bx]$

ANS: E PTS: 2

PROBLEM

INSTRUCTIONS: Use natural deduction to derive the conclusion in each problem.

1. Use conditional proof or indirect proof as needed:
1. $(x)[(Kx \vee Nx) \supset (Ex \bullet \sim Rx)]$
2. $(x)[(Kx \vee Sx) \supset (Rx \vee Hx)]$ / $(x)[Kx \supset (Ex \bullet Hx)]$

ANS:
Answer not provided

PTS: 10

2. Use conditional proof or indirect proof as needed:
1. $(\exists x)(Tx \vee Gx) \supset (x)(Fx \supset Mx)$
2. $(\exists x)(Gx \bullet \sim Mx)$ / $(\exists x)\sim Fx$

ANS:
Answer not provided

PTS: 10

3. Use conditional proof or indirect proof as needed:
1. $\sim(\exists x)(Qx \bullet Rx)$
2. $\sim(\exists x)(Px \vee \sim Qx)$ / $\sim(\exists x)(Rx \vee Px)$

ANS:
Answer not provided

PTS: 10

4. Use conditional proof or indirect proof as needed:
   1. $(x)(\exists y)[Ax \supset (Cy \supset Bxy)]$
   2. $(\exists x)(y)(Ax \bullet \sim Bxy)$ / $\sim(x)Cx$

ANS:
Answer not provided

PTS: 10

5. Use conditional proof or indirect proof as needed:
   1. $(x)(Jx \supset \sim Ga)$
   2. $(\exists x)(Jx \bullet Gc)$ / $a \neq c$

ANS:
Answer not provided

PTS: 10

6. Use the finite universe method to prove that the following argument is invalid:
   1. $(x)(Sx \supset Tx)$
   2. $(\exists x)\sim Tx$ / $(x)\sim Sx$

ANS:
Answer not provided

PTS: 10

Chapter 8 Test B

MULTIPLE CHOICE

INSTRUCTIONS: Select the correct translation for each statement.

1. Alice will cheer if either Casey or Enright scores a touchdown.
   a. $Ca \supset (Sc \vee Se)$
   b. $(Sc \vee Se) \supset Ca$
   c. $(Cs \vee Es) \supset Ac$
   d. $Ac \supset (Cs \vee Es)$
   e. $(\exists x)(Cx \vee Ex) \supset (\exists y)Ax$

   ANS: B PTS: 2

2. Every firefly glows in the dark.
   a. $(x)(Fx \supset Gx)$
   b. $(x)(Gx \supset Fx)$
   c. $(\exists x)(Fx \supset Gx)$
   d. $(\exists x)(Fx \bullet Gx)$
   e. $(\exists x)(Hx \supset Fx)$

   ANS: A PTS: 2

3. A mouse is in the closet.
   a. $(\exists x)(Mx \vee Cx)$
   b. $(x)(Mx \supset Cx)$
   c. $(\exists x)(Mx \supset Cx)$
   d. $(x)(Mx \bullet Cx)$
   e. $(\exists x)(Mx \bullet Cx)$

   ANS: E PTS: 2

4. A wallaby is a marsupial.
   a. $(\exists x)(Mx \bullet \sim Wx)$
   b. $(\exists x)(Wx \bullet Mx)$
   c. $(\exists x)(Wx \supset Mx)$
   d. $(x)(Wx \supset Mx)$
   e. $(x)(Mx \supset Wx)$

   ANS: D PTS: 2

5. Not all tennis players are high strung.
   a. $(x)(Tx \supset \sim Hx)$
   b. $(\exists x)(Tx \supset \sim Hx)$
   c. $(\exists x)(Tx \bullet \sim Hx)$
   d. $(x)(Hx \supset Tx)$
   e. $(x)(Tx \bullet \sim Hx)$

   ANS: C PTS: 2

6. No liberals are conservatives.

a. $(\exists x)(Cx \bullet \sim Lx)$
b. $(\exists x)(Lx \bullet \sim Cx)$
c. $\sim(x)(Lx \supset Cx)$
d. $(\exists x)(Lx \supset \sim Cx)$
e. $(x)(Lx \supset \sim Cx)$

ANS: E PTS: 2

7. Only frogs and toads inhabit this cave.
a. $(x)[Ix \supset (Fx \vee Tx)]$
b. $(\exists x)[(Fx \bullet Tx) \supset Ix]$
c. $(x)[Ix \supset (Fx \bullet Tx)]$
d. $(x)[(Fx \bullet Tx) \supset Ix]$
e. $(x)[(Fx \vee Tx) \supset Ix]$

ANS: A PTS: 2

8. Every giant sequoia is precious.
a. $(x)[(Gx \supset Px) \bullet (Sx \supset Px)]$
b. $(x)[(Gx \bullet Sx) \supset Px]$
c. $(x)[(Gx \vee Sx) \supset Px]$
d. $(x)[Px \supset (Gx \bullet Sx)]$
e. $(\exists x)[(Gx \bullet Sx) \bullet Px]$

ANS: B PTS: 2

9. All the cakes and pies are delicious.
a. $(x)[Dx \supset (Cx \vee Px)]$
b. $(\exists x)[(Px \bullet Cx) \bullet Dx]$
c. $(x)[(Cx \bullet Px) \supset Dx]$
d. $(x)[(Cx \vee Px) \supset Dx]$
e. $(\exists x)[(Px \bullet Cx) \supset Dx]$

ANS: D PTS: 2

10. Miriam will be hired if and only if every manager approves.
a. $Hm \equiv (\exists x)(Mx \bullet Ax)$
b. $Hm \equiv (\exists x)(Mx \supset Ax)$
c. $Hm \equiv (x)(Ax \supset Mx)$
d. $Hm \supset (x)(Mx \supset Ax)$
e. $Hm \equiv (x)(Mx \supset Ax)$

ANS: E PTS: 2

11. If any house burns, then every fireman will respond.
a. $(x)(Hx \supset Bx) \supset (\exists x)(Fx \bullet Rx)$
b. $(x)[(Hx \bullet Bx) \supset (\exists y)(Fy \bullet Ry)]$
c. $(\exists x)(Hx \bullet Bx) \supset (x)(Fx \supset Rx)$
d. $(x)(Hx \supset Bx) \supset (\exists x)(Fx \bullet Rx)$
e. $(x)[(Hx \bullet Bx) \supset (Fx \bullet Rx)]$

ANS: C PTS: 2

12. Angela wrote a poem.

a. $(\exists x)(Px \bullet Wax)$
b. $(x)(Wax \supset Px)$
c. Wap
d. $(\exists x)(\exists y)(Px \bullet Wxy)$
e. $(\exists x)(Px \bullet Ap)$

ANS: A PTS: 2

13. A few dogs chase every cat they see.
a. $(\exists x)\{Dx \supset (y)[(Cy \bullet Sxy) \supset Cxy]\}$
b. $(x)\{Dx \supset (y)[(Cy \bullet Sxy) \supset Cxy]\}$
c. $(\exists x)Dx \bullet (y)[(Cy \bullet Sxy) \supset Cxy]$
d. $(\exists x)Dx \supset (y)[(Cy \bullet Sxy) \supset Cxy]$
e. $(\exists x)\{Dx \bullet (y)[(Cy \bullet Sxy) \supset Cxy]\}$

ANS: E PTS: 2

14. If there are any guards, then if none of the prisoners escape, then they will be rewarded.
a. $(x)\{[Gx \supset (y)(Py \supset \sim Ey)] \supset Rx\}$
b. $(x)\{Gx \supset [(\exists y)(Py \bullet \sim Ey) \supset Rx]\}$
c. $(\exists x)Gx \supset [(y)(Py \supset \sim Ey) \supset Rx]$
d. $(x)\{Gx \supset [(y)(Py \supset \sim Ey) \supset Rx]\}$
e. $(\exists x)\{Gx \bullet [(y)(Py \supset \sim Ey) \supset Rx]\}$

ANS: D PTS: 2

15. Every person trusts someone or other.
a. $(\exists x)Px \bullet (\exists y)(Py \bullet Txy)$
b. $(x)[Px \supset (\exists y)(Py \bullet Txy)]$
c. $(x)[Px \supset (y)(Py \supset Txy)]$
d. $(\exists x)[Px \bullet (\exists y)(Py \bullet Txy)]$
e. $(x)Px \supset (\exists y)(Py \bullet Txy)$

ANS: B PTS: 2

16. If every witness tells the truth, then none of the guilty defendants will be acquitted.
a. $(x)\{(Wx \supset Tx) \supset (x)[(Gx \bullet Dx) \supset \sim Ax]\}$
b. $(x)(Wx \supset Tx) \supset (\exists x)[Gx \bullet (Dx \supset \sim Ax)]$
c. $(x)(Wx \supset Tx) \supset (x)[(Gx \bullet Dx) \supset \sim Ax]$
d. $(x)\{(Wx \supset Tx) \supset [(Gx \bullet Dx) \supset \sim Ax]\}$
e. $(\exists x)(Wx \bullet Tx) \supset (x)[(Gx \bullet Dx) \supset \sim Ax]$

ANS: C PTS: 2

17. The capital of Arkansas is not Saint Louis.
a. $(\exists x)(Cxa \bullet x \neq s)$
b. $(x)(Cxa \supset x \neq s)$
c. $(\exists x)[Cxa \bullet (y)(Cya \supset x \neq s)]$
d. $(\exists x)[Cxa \bullet (y)(Cya \supset y = x) \bullet x \neq s]$
e. $(\exists x)Cxa \bullet \sim Csa$

ANS: D PTS: 2

18. The only victim who survived is Oliver.

a. $Vo \bullet So \bullet (x)[(Vx \bullet Sx) \supset x = o]$
b. $(Vo \bullet So) \supset (x)[(Vx \bullet Sx) \supset x = o]$
c. $(x)[(Vx \bullet Sx) \supset x = o]$
d. $(\exists x)[(Vx \bullet Sx) \bullet x = o]$
e. $(\exists x)(Vx \bullet Sx) \supset (x)(x = o)$

ANS: A PTS: 2

19. Every city except Edenville was flooded.
a. $(x)[(Cx \bullet x \neq e) \supset Fx]$
b. $Ce \bullet \sim Fe \bullet (x)[(Cx \bullet x \neq e) \supset Fx]$
c. $(Ce \bullet \sim Fe) \supset (x)[(Cx \bullet x \neq e) \supset Fx]$
d. $Ce \bullet \sim Fe \bullet (\exists x)[(Cx \bullet x \neq e) \bullet Fx]$
e. $Ce \bullet \sim Fe \bullet (x)[(Cx \bullet Fx) \supset x \neq e]$

ANS: B PTS: 2

20. Rollins is the shortest player on the team.
a. $Pr \bullet (\exists x)[(Px \bullet x \neq r) \bullet Srx]$
b. $Pr \bullet (x)(Srx \supset x \neq r)$
c. $Pr \bullet (x)(Px \supset Srx)$
d. $Pr \supset (x)[(Px \bullet x \neq r) \supset Srx]$
e. $Pr \bullet (x)[(Px \bullet x \neq r) \supset Srx]$

ANS: E PTS: 2

PROBLEM

INSTRUCTIONS: Use natural deduction to derive the conclusion in each problem.

1. Use conditional proof or indirect proof as needed:
1. $(x)[Hx \supset (Rx \bullet Tx)]$
2. $(x)[(Rx \vee Hx) \supset (Gx \bullet Fx)]$ / $(x)(Hx \supset Fx)$

ANS:
Answer not provided

PTS: 10

2. Use conditional proof or indirect proof as needed:
1. $(x)[Kx \supset (Bx \bullet Cx)]$
2. $(\exists x)\sim Cx$ / $(\exists x)\sim Kx$

ANS:
Answer not provided

PTS: 10

3. Use conditional proof or indirect proof as needed:
1. $(\exists x)(Sx \vee Qx) \supset (x)[Qx \supset (Nx \vee Dx)]$
2. $(\exists x)(Qx \bullet \sim Dx)$ / $(\exists x)Nx$

ANS:
Answer not provided

PTS: 10

4. Use conditional proof or indirect proof as needed:
   1. $(x)(\exists y)(Ax \vee Nxy)$
   2. $(\exists x)(y)(Ax \supset Nxy)$ / $(\exists x)(\exists y)Nxy$

ANS:
Answer not provided

PTS: 10

5. Use conditional proof or indirect proof as needed:
   1. $(x)(\exists y)(Gx \supset Hay)$
   2. $(\exists x)(y)(Gx \bullet \sim Hay)$ / $a \neq e$

ANS:
Answer not provided

PTS: 10

6. Use the finite universe method to prove that the following argument is invalid:
   1. $(x)(Ax \vee Bx)$
   2. $(\exists x)\sim Ax$ / $(x)Bx$

ANS:
Answer not provided

PTS: 10

Chapter 8 Test C

MULTIPLE CHOICE

INSTRUCTIONS: Select the correct translation for each statement.

1. Megan is a biologist only if William is an Astronomer.
   a. $Bm \supset Aw$
   b. $Mb \supset Wa$
   c. $Aw \supset Bm$
   d. $(\exists x)Bx \supset (\exists x)Ax$
   e. $(x)(Mx \supset Wx)$

   ANS: A PTS: 2

2. If Andy and Carol pass the test, then Eve will be delighted.
   a. $(Pa \vee Pc) \supset Ed$
   b. $(x)Px \supset (\exists y)Dy$
   c. $(Ap \bullet Cp) \supset Ed$
   d. $Pac \supset De$
   e. $(Pa \bullet Pc) \supset De$

   ANS: E PTS: 2

3. Every journalist knows how to write.
   a. $Jx \supset Kx$
   b. $(\exists x)(Jx \supset Kx)$
   c. $(\exists x)Jx \supset (\exists x)Kx$
   d. $(x)(Jx \supset Kx)$
   e. $(\exists y)(Jy \bullet Ky)$

   ANS: D PTS: 2

4. A few scholarships were awarded.
   a. $(\exists x)(Sx \supset Ax)$
   b. $(\exists x)(Sx \bullet Ax)$
   c. $(x)(Sx \supset Ax)$
   d. $Sy \bullet Ay$
   e. $(x)(Sx \bullet Ax)$

   ANS: B PTS: 2

5. A freshman is not a sophomore.
   a. $Fy \supset \sim Sy$
   b. $(\exists x)(Fx \bullet Sx)$
   c. $(\exists x)(Fx \bullet \sim Sx)$
   d. $Fx \bullet \sim Sx$
   e. $(x)(Fx \supset \sim Sx)$

   ANS: E PTS: 2

6. A taxi is waiting.

a. $(x)(Tx \supset Wx)$
b. $(\exists x)(Tx \supset Wx)$
c. $(\exists x)(Tx \bullet Wx)$
d. $(x)(Tx \bullet Wx)$
e. $Tx \bullet Wx$

ANS: C PTS: 2

7. Not every applicant is eligible.
a. $(\exists x)(Ax \bullet Ex)$
b. $(\exists x)Ax \bullet (\exists x)\sim Ex$
c. $(x)(Ax \supset \sim Ex)$
d. $(\exists x)(Ax \bullet \sim Ex)$
e. $(x)(Ex \supset Ax)$

ANS: D PTS: 2

8. Ivan will be sad if and only if any child is injured.
a. $Si \equiv (\exists x)(Cx \bullet Ix)$
b. $(x)[(Cx \bullet Ix) \equiv Ix]$
c. $(\exists x)(Cx \bullet Ix) \supset Si$
d. $Si \equiv (x)(Cx \bullet Ix)$
e. $Si \equiv (x)(Cx \supset Ix)$

ANS: A PTS: 2

9. Elms and maples are deciduous trees.
a. $(x)[(Ex \vee Mx) \supset (Dx \supset Tx)]$
b. $(\exists x)[(Ex \vee Mx) \supset (Tx \bullet Dx)]$
c. $(x)[(Ex \bullet Mx) \supset (Tx \bullet Dx)]$
d. $(x)[(Ex \vee Mx) \supset (Tx \bullet Dx)]$
e. $(\exists x)[(Ex \vee Mx) \supset (Tx \bullet Dx)]$

ANS: D PTS: 2

10. The guests will be happy only if every room is clean and tidy.
a. $(\exists x)(Gx \bullet Hx) \supset (\exists x)[Rx \supset (Cx \bullet Tx)]$
b. $(x)[Rx \supset (Cx \bullet Tx)] \supset (\exists x)(Gx \bullet Hx)$
c. $(\exists x)(Gx \bullet Hx) \supset (x)[Rx \supset (Cx \bullet Tx)]$
d. $(x)\{(Gx \supset Hx) \supset [Rx \supset (Cx \bullet Tx)]\}$
e. $(x)(Gx \supset Hx) \supset (x)[Rx \supset (Cx \bullet Tx)]$

ANS: E PTS: 2

11. Whoever rides horses is adventurous.
a. $(x)\{Px \bullet (\exists y)[(Hy \bullet Rxy) \supset Ax]\}$
b. $(x)\{Px \bullet (\exists y)(Hy \bullet Rxy) \supset Ax\}$
c. $(x)\{Px \bullet (y)(Hy \bullet Rxy) \supset Ax\}$
d. $(\exists x)(Px \bullet Rxh) \supset (\exists y)Ay$
e. $(x)Px \supset (\exists y)[(Hy \bullet Rxy) \supset Ax]$

ANS: B PTS: 2

12. If Nancy marries Ralph, then everyone in the family will be happy.

a. $(Mn \bullet Rm) \supset (x)(Fx \supset Hx)$
b. $(\exists x)(Fx \bullet Hx) \supset Mnr$
c. $Mnr \supset (x)(Fx \supset Hx)$
d. $(Nm \bullet Rm) \supset (x)(Fx \supset Hx)$
e. $Mnr \supset (\exists x)(Fx \supset Hx)$

ANS: C PTS: 2

13. If all the plumbers are skilled, then if none of the faucets leak, then they will be commended.
a. $(x)\{(Px \bullet Sx) \supset [(y)(Fy \supset \sim Ly) \supset Cx]\}$
b. $(\exists x)(Px \bullet Sx) \supset [(y)(Fy \supset \sim Ly) \supset Cy]$
c. $(x)(Px \bullet Sx) \supset [(y)(Fy \supset \sim Ly) \supset Cx]$
d. $(x)\{(Px \supset Sx) \supset [(y)(Fy \supset \sim Ly) \supset Cx]\}$
e. $(x)\{(Px \bullet Sx) \supset [(\exists y)(Fy \bullet \sim Ly) \supset Cx]\}$

ANS: D PTS: 2

14. Some children lose every toy they own.
a. $(\exists x)\{Cx \bullet (y)[(Ty \bullet Oxy) \supset Lxy]\}$
b. $(\exists x)\{[Cx \bullet (\exists y)(Ty \bullet Oxy)] \supset Lxy\}$
c. $(x)\{[Cx \bullet (y)(Ty \bullet Oxy)] \supset Lxy\}$
d. $(x)\{[Cx \supset (y)(Ty \bullet Oxy)] \supset Lxy\}$
e. $(\exists x)[Cx \bullet (y)(Ty \bullet Oxy)] \supset (y)Lxy$

ANS: A PTS: 2

15. Everyone fears someone (or other).
a. $(x)(y)[(Px \bullet Py) \supset Fxy]$
b. $(x)(\exists y)[(Px \bullet Py) \supset Fxy]$
c. $(\exists x)(y)[(Px \bullet Py) \bullet Fxy]$
d. $(x)(\exists y)[(Px \bullet Py) \bullet Fxy]$
e. $(\exists x)(\exists y)[(Px \bullet Py) \bullet Fxy]$

ANS: D PTS: 2

16. The father of Angelo is an Italian.
a. $(x)\{[Fxa \bullet (y)(Fya \supset y = x)] \supset Ix\}$
b. $(\exists x)(Fxa \bullet Ix)$
c. $(\exists x)[Fxa \bullet (y)(Fya \supset y = x) \bullet Ix]$
d. $(\exists x)[Fxa \bullet (y)(Fya \supset y = x)] \supset (\exists x)Ix$
e. $(x)(Fxa \supset Ix)$

ANS: C PTS: 2

17. Every student except Christopher passed the course.
a. $(\exists x)[Sx \bullet \sim Px \bullet x = c]$
b. $(Sc \bullet \sim Pc) \supset (x)[(Sx \bullet Px) \supset x \neq c]$
c. $Sc \bullet \sim Pc \bullet (x)[(Sx \bullet x = c) \supset \sim Px]$
d. $(x)[(Sx \bullet \sim Px) \supset x = c]$
e. $Sc \bullet \sim Pc \bullet (x)[(Sx \bullet x \neq c) \supset Px]$

ANS: E PTS: 2

18. The only daughter Robert has is Esther.

a. $(x)(Dxr \supset e = e)$
b. $Der \bullet (x)(Dxr \supset x = e)$
c. Der
d. $Der \bullet (x)(x = e \supset Der)$
e. $(\exists x)(Dxr \bullet x = e)$

ANS: B PTS: 2

19. There is at most one winner.
a. $(\exists x)(\exists y)(Wx \bullet Wy)$
b. $(x)(y)[(Wx \bullet Wy) \equiv x = y]$
c. $(x)(y)[(Wx \bullet Wy) \supset x = y]$
d. $(\exists x)(\exists y)[(Wx \bullet Wy) \bullet x = y]$
e. $(x)(\exists y)[(Wx \bullet Wy) \bullet e = y]$

ANS: C PTS: 2

20. The biggest dog in the show is Rover.
a. $Dr \bullet Sr \bullet (x)[(Dx \bullet Sx \bullet Brx) \supset x \neq r]$
b. $Dr \bullet Sr \bullet (x)[(Dx \bullet Sx) \supset Brx]$
c. $(x)[(Dx \bullet Sx \bullet x \neq r) \supset Brx]$
d. $Dr \bullet Sr \bullet (x)[(Dx \bullet Sx \bullet x \neq r) \supset Brx]$
e. $(x)[(Dx \bullet Sx) \supset Brx]$

ANS: D PTS: 2

PROBLEM

INSTRUCTIONS: Use natural deduction to derive the conclusion in each problem.

1. Use conditional proof or indirect proof as needed:
1. $(x)[(Sx \vee Nx) \supset (Fx \vee Hx)]$
2. $(\exists x)(Nx \bullet \sim Hx)$ / $(\exists x)Fx$

ANS:
Answer not provided

PTS: 10

2. Use conditional proof or indirect proof as needed:
1. $(x)[Rx \supset (Tx \bullet \sim Ex)]$
2. $(x)[(Qx \bullet Rx) \supset Ex]$ / $(x)(Rx \supset \sim Qx)$

ANS:
Answer not provided

PTS: 10

3. Use conditional proof or indirect proof as needed:
1. $(x)Gx \vee (x)(Bx \supset Gx)$
2. $\sim(x)(Gx \vee Kx)$ / $\sim(x)(Bx \vee Kx)$

ANS:
Answer not provided

PTS: 10

4. Use conditional proof or indirect proof as needed:
   1. $(x)(\exists y)(Tx \bullet \sim Nxy)$
   2. $(\exists y)(x)[Tx \supset (Nxy \vee Rxy)]$ / $(\exists x)(\exists y)Rxy$

ANS:
Answer not provided

PTS: 10

5. Use conditional proof or indirect proof as needed:
   1. $(x)(Dx \supset x = a)$
   2. $(x)[Ex \supset (Dx \bullet x = e)]$ / $(\exists x)(Ex \supset a = e)$

ANS:
Answer not provided

PTS: 10

6. Use the finite universe method to prove that the following argument is invalid:
   1. $(x)Ax \supset (\exists x)Bx$
   2. $(\exists x)Ax$ / $(\exists x)Bx$

ANS:
Answer not provided

PTS: 10

Chapter 9 Test A

MULTIPLE CHOICE

Basic Analogical Reasoning
Judy is considering the purchase of a new Kitchen Maid dishwasher. Judy's friend Jasper bought a new Kitchen Maid six months ago, and he finds that the dishwasher gets his dishes, cups, glasses, and eating utensils sparkling clean. Judy reasons that a new Kitchen Maid will do just as well for her. How do the following facts bear on Judy's conclusion?

1. Judy buys the same model dishwasher as Jasper's.
   a. Weakens.
   b. Strengthens.
   c. Has no effect.

   ANS: B PTS: 2

2. Judy's dishwasher has a stainless steel front panel, while Jasper's is almond colored enamel.
   a. Has no effect.
   b. Strengthens.
   c. Weakens.

   ANS: A PTS: 2

3. Judy loads her dishwasher in a helter-skelter manner, whereas Jasper loads his in an orderly way, ensuring proper separation between the plates, bowls, and utensils.
   a. Strengthens.
   b. Has no effect.
   c. Weakens.

   ANS: C PTS: 2

4. Judy always rinses her dishes in the sink before putting them in the dishwasher, but Jasper never rinses anything.
   a. Has no effect.
   b. Weakens.
   c. Strengthens.

   ANS: C PTS: 2

5. Judy uses a different kind of soap than Jasper uses.
   a. Weakens.
   b. Strengthens.
   c. Has no effect.

   ANS: A PTS: 2

6. Judy has five other friends who bought Kitchen Maid dishwashers. All these friends' dishes always come out sparkling clean.
   a. Weakens.
   b. Strengthens.
   c. Has no effect.

   ANS: B PTS: 2

7. Judy has five other friends who bought Kitchen Maid dishwashers. All these friends bought a different model from the one Judy and Jasper bought.
   a. Strengthens.
   b. Weakens.
   c. Has no effect.

   ANS: B PTS: 2

8. Judy has five other friends who bought Kitchen Maid dishwashers. All these friends live in studio apartments.
   a. Has no effect.
   b. Weakens.
   c. Strengthens.

   ANS: A PTS: 2

9. Judy has five other friends who bought Kitchen Maid dishwashers. All these friends are elementary school teachers.
   a. Strengthens.
   b. Weakens.
   c. Has no effect.

   ANS: C PTS: 2

10. Judy changes her conclusion to state that she will get results almost as good as Jasper's.
    a. Weakens.
    b. Strengthens.
    c. Has no effect.

    ANS: B PTS: 2

PROBLEM

1. **Analogy and Legal Reasoning**
   Rachel Paulson, an elderly woman with no living relatives and few close friends, lived in a small house with her longtime friend and constant companion Terri, a loveable Yorkshire terrier. One day she brought Terri into a veterinary clinic for a rabies booster. Dr. Curtis, the veterinarian on duty, had just returned from a three martini lunch, and, in place of the rabies vaccine, he negligently injected Terri with a lethal drug used to euthanize sick and dying animals. Terri died as a result of the injection. Paulson then filed suit against Curtis for the wrongful death of Terri, asking the court to award her damages for loss of companionship and emotional distress.

   There are two controlling cases in this jurisdiction:

   Maggie's Pets v. Healthy Treats, Inc. Maggie ran a pet store that offered a large number of cats and dogs for sale to the public. One of the pets was Posie, a toy poodle whom Maggie was particularly attached to. As a result of her fondness for Posie, Maggie was stricken with grief when Posie died after having been fed contaminated food made by Healthy Treats, Inc. Maggie filed suit against Healthy Treats for the wrongful death of Posie, and she asked the court to award her damages for loss of companionship and emotional distress. The court ruled against Maggie, holding that Posie was merely her personal property. As a result, Maggie was entitled to recover only what she would have received had she succeed in selling Posie to a customer.

Sanders v. Kinderclinic. When Mr. and Mrs. Sanders brought their six-month-old boy Tyler into the Kinderclinic for a check-up, the physician who examined him negligently used a stethoscope that was contaminated with a lethal staff bacterium. As a result, Tyler was infected with the bacterium, and he eventually died from the infection. Tyler's parents sued the clinic for wrongful death. The court found in favor of the parents, awarding them damages for loss of companionship and emotional distress.

Construct two arguments, one supporting Paulson, the other supporting Curtis.

ANS:
Answer not provided

PTS: 10

2. **Analogy and Moral Reasoning**
Suppose that you, your spouse, and infant child live in a small house in Galveston, Texas, which is situated on the Gulf of Mexico. Suppose a ferocious hurricane strikes Galveston, knocking out all of the power lines and closing the main highway to Houston. Luckily your house is spared, and you have enough food in your refrigerator and freezer to last for a few days. But without electricity, the food will quickly rot, and your supply of infant formula will spoil.

Desperately you race to the closest convenience store to buy a supply of ice, but you find that the store is charging $50 for a ten pound bag. It turns out that all the other stores are charging the same price, and there is no way you can pay this much, especially when you realize you will need several bags. So you race to the local Home Depot to buy a small generator to keep the refrigerator and freezer running. But you find that generators that were going for $200 yesterday are now selling for over $2000.

The phenomenon that you have encountered is called price gouging. There is no federal law against price gouging, and while several states have laws outlawing price gouging during an emergency, Texas is not one of them. People who support the morality of price gouging argue that a seller should be able to charge whatever he can get for a product, while those who oppose it argue that it is simply wrong to take advantage of people during an emergency. Develop as many arguments from analogy you can think of either supporting or opposing the morality of price gouging.

ANS:
Answer not provided

PTS: 10

Chapter 9 Test B

MULTIPLE CHOICE

Basic Analogical Reasoning
Connie is thinking about registering for Professor Langley's course in Italian Renaissance history. Connie's friend Lydia took that course a year earlier and got an A. Connie figures that she will get an A, too. How do the following facts bear on Connie's conclusion?

1. Connie is at least as bright as Lydia.
   a. Weakens.
   b. Strengthens.
   c. Has no effect.

   ANS: B PTS: 2

2. Connie and Lydia both use Apple computers.
   a. Has no effect.
   b. Strengthens.
   c. Weakens.

   ANS: A PTS: 2

3. Lydia is a history major, but Connie is a biology major.
   a. Strengthens.
   b. Has no effect.
   c. Weakens.

   ANS: C PTS: 2

4. Connie doesn't take class notes as well as Lydia does.
   a. Weakens.
   b. Strengthens.
   c. Has no effect.

   ANS: A PTS: 2

5. Connie took two other history courses with Lydia, and she got the same grade as Lydia in both courses.
   a. Has no effect.
   b. Strengthens.
   c. Weakens.

   ANS: B PTS: 2

6. Connie discovers four biology majors who took professor Langley's course in Italian Renaissance history. All four got As.
   a. Weakens.
   b. Has no effect.
   c. Strengthens.

   ANS: C PTS: 2

7. Connie discovers four biology majors who took professor Langley's course in Italian Renaissance history. All four wear Calvin Klein jeans, and so does Connie.
   a. Strengthens.
   b. Has no effect.
   c. Weakens.

   ANS: B PTS: 2

8. Connie discovers four biology majors who took professor Langley's course in Italian Renaissance history. All four come from different backgrounds and have different interests.
   a. Strengthens.
   b. Weakens.
   c. Has no effect.

   ANS: A PTS: 2

9. Connie discovers four biology majors who took professor Langley's course in Italian Renaissance history. All four spent a year taking courses in Florence, Italy.
   a. Has no effect.
   b. Weakens.
   c. Strengthens.

   ANS: B PTS: 2

10. Connie changes her conclusion: She'll get at least an A– in Professor Langley's course.
    a. Weakens.
    b. Has no effect.
    c. Strengthens.

    ANS: C PTS: 2

PROBLEM

1. **Analogy and Legal Reasoning**
   Bob Wilson enjoyed spending time relaxing in the heated spa situated in the back yard of his home. On a couple of occasions he noticed his next door neighbor's four-year old boy, Greg Adams, staring at him through the fence that separated the two yards. One afternoon, while Bob was away at work, and without Bob's permission, Greg climbed the fence, removed the cover from the spa, jumped in, and drowned. Mr. and Mrs. Adams filed suit against Bob for failing to install a lock on the lid of the spa.

   There are two controlling cases in this jurisdiction:

   Andrews v. Lewis: While Lewis's home was being remodeled, Andrews was walking in the neighborhood when he noticed the front door of Lewis's home was wide open. Andrews entered the home for the purpose of stealing some of the contractor's tools, but while inside he fell through a hole in the floor that had been covered with tar paper. Andrews, who suffered injury, sued Lewis for maintaining a hazardous condition on the premises. The court ruled in favor of Lewis, noting that Andrews was a trespasser.

   Garrison v. Fashion Stores: While Mrs. Garrison was shopping at one of the defendant's stores, her five-year-old boy Roger left her side for a few minutes to play on the escalator. Roger was injured by a broken tread. Mrs. Garrison sued the store, and the court found in her favor, noting that the store had a duty to inspect the escalator and take precautions to ensure the safety of the shoppers.

Construct two arguments, one supporting Wilson, the other supporting Adams.

ANS:
Answer not provided

PTS: 10

2. **Analogy and Moral Reasoning**
A sweatshop is a manufacturing facility where workers are paid pennies per hour to make articles that sell for thousands of times more than what the laborers are paid to produce them. Today, most sweatshops are found in Asian countries, particularly China, and the articles manufactured include every form of clothing, Nike shoes, Barbie dolls for Mattel, Apple iPods, clothing for Disney, and countless other items sold by WalMart and other retailers. Sweatshops hire adults and children as young as 5 years old, and they often house them in firetraps, expose them to dangerous chemicals, deny them bathroom breaks, demand sexual favors from women, and force them to work as long as 15 hours per day, 7 days per week.

People who defend sweatshops argue that the workers sign up of their own free will and consider working in a sweatshop to be a highly desirable form of employment. Those who oppose sweatshops scoff at the idea that the choice to work there is made freely because the workers live in desperate poverty and have no other alternative.

Sweatshops are legal in most of the countries in which they are found today. But are they moral? Develop as many arguments from analogy you can think of either supporting or opposing the morality of sweatshops.

ANS:
Answer not provided

PTS: 10

Chapter 9 Test C

MULTIPLE CHOICE

Basic Analogical Reasoning
Morgan needs a new set of tires for her car, and she wants tires that will last for 50,000 miles. Her friend Ashley bought a set of Goodmonth XK-1 tires four years ago, and those tires lasted 50,000 miles. Morgan concludes that if she buys Goodmonth XK-1 tires for her own car, those tires will last for 50,000 miles. How do the following facts bear on Morgan's conclusion?

1. Morgan and Ashley drive the same model car.
   a. Strengthens.
   b. Weakens.
   c. Has no effect.

   ANS: A PTS: 2

2. Morgan's car is blue, but Ashley's is silver colored.
   a. Strengthens.
   b. Weakens.
   c. Has no effect.

   ANS: C PTS: 2

3. Morgan drives aggressively, but Ashley drives conservatively.
   a. Strengthens.
   b. Weakens.
   c. Has no effect.

   ANS: B PTS: 2

4. Ashley does most of her driving on city streets and freeways, whereas Morgan drives mostly on country roads.
   a. Strengthens.
   b. Weakens.
   c. Has no effect.

   ANS: B PTS: 2

5. Morgan discovers 6 acquaintances who bought Goodmonth XK-1 tires. All got 50,000 miles of use.
   a. Strengthens.
   b. Weakens.
   c. Has no effect.

   ANS: A PTS: 2

6. Morgan discovers 6 acquaintances who bought Goodmonth XK-1 tires. All drive different model cars.
   a. Strengthens.
   b. Weakens.
   c. Has no effect.

   ANS: A PTS: 2

7. Morgan discovers 6 acquaintances who bought Goodmonth XK-1 tires. All drive cars equipped with CD changers.
   a. Strengthens.
   b. Weakens.
   c. Has no effect.

   ANS: C PTS: 2

8. Morgan discovers 6 acquaintances who bought Goodmonth XK-1 tires. All drive conservatively.
   a. Strengthens.
   b. Weakens.
   c. Has no effect.

   ANS: B PTS: 2

9. Goodmonth recently hired a new Chief Financial Officer.
   a. Strengthens.
   b. Weakens.
   c. Has no effect.

   ANS: C PTS: 2

10. Morgan changes her conclusion to state that she will get at least 45,000 miles of use.
    a. Strengthens.
    b. Weakens.
    c. Has no effect.

    ANS: A PTS: 2

PROBLEM

1. **Analogy and Legal Reasoning**
   Henry paid a dog breeder $500 for a pit bull. Prior to the purchase the breeder assured him that the dog would not bite anyone in the household unless it was provoked. Henry brought the dog home, and it gradually became a member of his rowdy family. However, after 10 months, without being provoked, the dog bit his wife, causing serious injury. Henry then filed a lawsuit against the breeder claiming damages for a defective product. After filing the suit Henry discovered that his dog's male parent was vicious.

   There are two controlling cases in this jurisdiction:

   Carter v. Ace Electric: Carter bought an electric hairdryer from manufacturer Ace Electric. The hairdryer had a defective ground connection, and Carter suffered injury as a result of this defect. The court ruled in favor of Carter, noting that Ace knew or should have known about this defect at the time the hairdryer was made.

   Baker v. Harlow Motors: Baker purchased a new car from Harlow Motors, and after 10 months the engine stopped running. During that interval Baker had made several modifications to the engine. The court ruled in favor of Harlow because Baker had modified the engine.

   Construct two arguments, one supporting Henry, the other supporting the breeder.

   ANS:
   Answer not provided

PTS: 10

2. **Analogy and Moral Reasoning**
Embryonic stem cell research typically involves the destruction of human embryos. Such research is often criticized because human embryos, it is claimed, are human beings, and the destruction of human beings for research purposes is wrong. Write a short essay either favoring or opposing embryonic stem cell research. Develop as many arguments from analogy as you can think of either supporting or opposing the claim that human embryos are human beings.

ANS:
Answer not provided

PTS: 10

Chapter 10 Test A

MULTIPLE CHOICE

1. When we say that electrically charged particles in the atmosphere cause lightning, we mean 'cause' in the sense of a:
   a. Necessary but not a sufficient condition.
   b. Necessary and a sufficient condition.
   c. Relative and an absolute condition.
   d. Relative but not an absolute condition.
   e. Sufficient but not a necessary condition.

   ANS: A PTS: 2

2. When we say that stubbing your toe causes you to feel pain, we mean 'cause' in the sense of a:
   a. Relative and an absolute condition.
   b. Necessary and a sufficient condition.
   c. Sufficient but not a necessary condition.
   d. Relative but not an absolute condition.
   e. Necessary but not a sufficient condition.

   ANS: C PTS: 2

3. When we say that applying a force to the end of a coil spring causes the spring to stretch, we mean 'cause' in the sense of a:
   a. Necessary but not a sufficient condition.
   b. Necessary and a sufficient condition.
   c. Sufficient but not a necessary condition.
   d. Relative but not an absolute condition.
   e. Relative and an absolute condition.

   ANS: B PTS: 2

   Table 1A
   Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	–	–	–	*	–	–
2	*	*	–	*	–	–	*
3	–	*	–	–	*	*	–
4	–	*	*	*	*	*	*
5	*	–	–	*	–	–	–
6	–	*	*	–	–	*	*

4. What cause is suggested by the information in Table 1A?
   a. D is a sufficient but not necessary condition for the phenomenon.
   b. A is a sufficient and necessary condition for the phenomenon.
   c. F is a necessary but not a sufficient condition for the phenomenon.
   d. E is a necessary but not sufficient condition for the phenomenon.
   e. C is a sufficient but not a necessary condition for the phenomenon.

   ANS: E PTS: 2

5. What method was used to determine the cause suggested by Table 1A?
   a. The method of concomitant variation.
   b. The joint method of agreement and difference.
   c. The method of difference.
   d. An unnamed method.
   e. The method of agreement.

   ANS: D PTS: 2

Table 2A
Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	_	*	*	*	*	*
2	*	*	_	*	*	_	*
3	*	*	_	*	*	*	*
4	*	*	*	_	*	*	*
5	_	*	_	*	*	*	*
6	*	_	*	_	*	_	*

6. What cause is suggested by the information in Table 2A?
   a. C is a necessary condition for the phenomenon.
   b. A is a necessary and sufficient condition for the phenomenon.
   c. B is a necessary but not a sufficient condition for the phenomenon.
   d. D is a necessary condition for the phenomenon.
   e. E is a necessary condition for the phenomenon.

   ANS: E PTS: 2

7. What method was used to determine the cause suggested by Table 2A?
   a. The joint method of agreement and difference.
   b. The method of agreement.
   c. The method of difference.
   d. The method of concomitant variation.
   e. An unnamed method.

   ANS: B PTS: 2

Table 3A
Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	*	*	_	*	*	*
2	_	*	*	*	*	_	*
3	_	_	*	_	*	*	_
4	*	*	_	*	_	*	*
5	*	_	_	*	_	_	_
6	*	*	_	_	*	*	*

8. What cause is suggested by the information in Table 3A?
   a. F is a necessary and sufficient condition for the phenomenon.

b. A is a necessary condition for the phenomenon.
c. B is a necessary and sufficient condition for the phenomenon.
d. D is a sufficient condition for the phenomenon.
e. C is a sufficient condition for the phenomenon.

ANS: C PTS: 2

9. What method was used to determine the cause suggested by Table 3A?
a. The joint method of agreement and difference.
b. The method of residues.
c. The method of difference.
d. The method of agreement.
e. The method of concomitant variation.

ANS: A PTS: 2

Table 4A
Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	*	*	*	*	*	*
2	*	*	*	–	*	*	–

10. What cause is suggested by the information in Table 4A?
a. E is a necessary and sufficient condition for the phenomenon.
b. B is a sufficient condition for the phenomenon.
c. C is a necessary condition for the phenomenon.
d. D is a sufficient condition for the phenomenon.
e. F is a sufficient condition for the phenomenon.

ANS: D PTS: 2

11. What method was used to determine the cause suggested by Table 4A?
a. The method of difference.
b. The method of concomitant variation.
c. The method of agreement.
d. The method of residues.
e. The joint method of agreement and difference.

ANS: A PTS: 2

Table 5A
Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	–	–	*	*	–	–
2	*	*	*	*	–	*	*
3	–	*	*	–	*	*	*
4	*	–	–	–	–	*	–
5	*	*	–	*	*	–	*
6	–	*	*	–	*	*	–

12. What cause is suggested by the information in Table 5A?
    a. C is a sufficient but not a necessary condition for the phenomenon.
    b. B is a necessary but not a sufficient condition for the phenomenon.
    c. F is a necessary but not a sufficient condition for the phenomenon.
    d. D is a sufficient but not a necessary condition for the phenomenon.
    e. C is a necessary condition for the phenomenon.

    ANS: B PTS: 2

13. Suppose that the owner of a 1980 Porsche Carrera notices that it takes 7 percent longer for her car to accelerate from zero to sixty than it did when the car was new. From a book relating to relevant parameters, she calculates that 2 percent of the reduction can be attributed to the fact that the car now has larger tires. Also, the alcohol content of the gas accounts for 2 percent, dirty spark plugs for 1 percent, and the fact that she now lives in Los Angeles, where the air is thicker than it was in Denver, where she bought the car, accounts for 1 percent. The owner attributes the remaining 1 percent to general aging of the engine. What method did the owner use in drawing this conclusion?
    a. The joint method of agreement and difference.
    b. The method of agreement.
    c. The method of difference.
    d. The method of concomitant variation.
    e. The method of residues.

    ANS: E PTS: 2

14. Suppose that a philosophy professor is able to monitor the amount of time her logic students spend working on a computerized tutorial program. When the students spend 5 hours on the program, their average grade increases by 4 percentage points. When they spend 10 hours on the program, their average grade increases by an additional 4 percentage points, and when they spend 15 hours working on the program, their grades increase by yet an additional 4 percentage points. The professor concludes that work on the tutorial program causes an increase in student grades. What method did the professor use in drawing this conclusion?
    a. The method of difference.
    b. The method of agreement.
    c. The method of concomitant variation.
    d. The method of residues.
    e. The joint method of agreement and difference.

    ANS: C PTS: 2

15. The method used by Henrietta Swan Leavitt in her discovery involving Cepheids, which is described in your textbook, is similar to:
    a. The method of agreement.
    b. The method of residues.
    c. The method of difference.
    d. The method of concomitant variation.
    e. The joint method of agreement and difference.

    ANS: D PTS: 2

Chapter 10 Test B

MULTIPLE CHOICE

1. When we say that throwing a wine glass against a brick wall causes it to break, we mean 'cause' in the sense of a:
   a. Necessary but not a sufficient condition.
   b. Necessary and a sufficient condition.
   c. Relative and an absolute condition.
   d. Relative but not an absolute condition.
   e. Sufficient but not a necessary condition.

   ANS: E PTS: 2

2. When we say that an electric current flowing through the filament of a light bulb causes the bulb to produce light, we mean 'cause' in the sense of a:
   a. Relative and an absolute condition.
   b. Necessary and a sufficient condition.
   c. Sufficient but not a necessary condition.
   d. Relative but not an absolute condition.
   e. Necessary but not a sufficient condition.

   ANS: B PTS: 2

3. When we say that water droplets in the atmosphere cause a rainbow to appear, we mean 'cause' in the sense of a:
   a. Necessary but not a sufficient condition.
   b. Necessary and a sufficient condition.
   c. Sufficient but not a necessary condition.
   d. Relative but not an absolute condition.
   e. Relative and an absolute condition.

   ANS: A PTS: 2

   Table 1B
   Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	–	*	–	*	*	*
2	*	*	–	*	–	*	–
3	–	*	*	–	*	*	*
4	–	*	–	*	*	–	*
5	*	–	*	–	–	*	–
6	–	*	*	*	–	–	–

4. What cause is suggested by the information in Table 1B?
   a. D is a sufficient but not a necessary condition for the phenomenon.
   b. A is a sufficient and necessary condition for the phenomenon.
   c. F is a necessary but not a sufficient condition for the phenomenon.
   d. E is a sufficient and necessary condition for the phenomenon.
   e. A is a sufficient and necessary condition for the phenomenon.

ANS: D PTS: 2

5. What method was used to determine the cause suggested by Table 1B?
   a. The method of agreement.
   b. The joint method of agreement and difference.
   c. The method of difference.
   d. The method of concomitant variation.
   e. The method of residues.

   ANS: B PTS: 2

Table 2B
Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	*	*	*	_	*	*
2	*	*	_	_	*	_	*
3	_	*	*	*	_	*	_
4	*	_	*	_	*	*	_
5	_	*	*	*	_	*	*
6	*	_	_	*	_	_	_

6. What cause is suggested by the information in Table 2B?
   a. C is a necessary but not a sufficient condition for the phenomenon.
   b. A is a sufficient but not a necessary condition for the phenomenon.
   c. B is a necessary but not a sufficient condition for the phenomenon.
   d. D is a sufficient but not a necessary condition for the phenomenon.
   e. F is a sufficient and necessary condition for the phenomenon.

   ANS: C PTS: 2

Table 3B
Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	*	*	*	_	*	*
2	_	*	*	*	*	_	*
3	_	*	*	*	*	*	*
4	*	*	_	*	*	*	*
5	*	_	*	*	*	_	*
6	*	*	_	*	*	*	*

7. What cause is suggested by the information in Table 3B?
   a. B is a sufficient condition for the phenomenon.
   b. E is a necessary condition for the phenomenon.
   c. D is a sufficient condition for the phenomenon.
   d. D is a necessary and sufficient condition for the phenomenon.
   e. D is a necessary condition for the phenomenon.

   ANS: E PTS: 2

8. What method was used to determine the cause suggested by Table 3B?

a. The method of agreement.
b. The method of residues.
c. The method of difference.
d. The joint method of agreement and difference.
e. The method of concomitant variation.

ANS: A PTS: 2

Table 4B
Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	*	*	*	*	*	*
2	*	*	_	*	*	*	_

9. What cause is suggested by the information in Table 4B?
a. B is a sufficient condition for the phenomenon.
b. C is a sufficient condition for the phenomenon.
c. C is a necessary condition for the phenomenon.
d. C is a necessary and sufficient condition for the phenomenon.
e. B is a necessary condition for the phenomenon.

ANS: B PTS: 2

10. What method was used to determine the cause suggested by Table 4B?
a. The method of residues.
b. The method of concomitant variation.
c. The method of agreement.
d. The method of difference.
e. The joint method of agreement and difference.

ANS: D PTS: 2

Table 5B
Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	_	_	*	*	_	_
2	*	*	*	*	_	*	*
3	_	*	*	_	*	*	*
4	*	_	_	_	_	*	_
5	*	*	_	*	*	_	*
6	_	*	*	_	*	*	_

11. What cause is suggested by the information in Table 5B?
a. F is a necessary but not a sufficient condition for the phenomenon.
b. C is a sufficient but not a necessary condition for the phenomenon.
c. B is a necessary but not a sufficient condition for the phenomenon.
d. B is a sufficient but not a necessary condition for the phenomenon.
e. C is a necessary but not a sufficient condition for the phenomenon.

ANS: C PTS: 2

12. Suppose that a sales consulting firm notices a correlation between the sale of house paint and number of home sales in an area. As the number of home sales increases, the sale of house paint increases, and vice versa. The consulting firm concludes that buying a home causes the new owners to purchase house paint. What method did the consulting firm use in drawing this conclusion?
    a. The method of concomitant variation.
    b. The method of agreement.
    c. The method of difference.
    d. The method of residues.
    e. The joint method of agreement and difference.

    ANS: A PTS: 2

13. Suppose that an accountant for a bank notices a 5 percent reduction in profits for a certain quarter of operations. The accountant identifies four sources of increased costs that might account for this: increased salaries for some of the employees, increased utility costs, new computers for one of the departments, and increased real estate taxes. After further study, the accountant finds that each of these is responsible for a 1 percent reduction in profits, which adds up to a total of 4 percent. Unable to account for the final 1 percent loss, the accountant attributes it to embezzlement by one of the employees. What method did the accountant use in drawing this conclusion?
    a. The method of agreement.
    b. The joint method of agreement and difference.
    c. The method of difference.
    d. The method of residues.
    e. The method of concomitant variation.

    ANS: D PTS: 2

14. The experiment described in your textbook involving the effect of a possible carcinogen on 100 mice is most closely related to which of Mill's methods?
    a. The method of concomitant variation.
    b. The joint method of agreement and difference.
    c. The method of difference.
    d. The method of agreement.
    e. The method of residues.

    ANS: C PTS: 2

15. The retrospective study described in your textbook in which a nutritionist attempted to determine the effect of several vitamins and minerals on atherosclerosis is closely related to which of Mill's methods?
    a. The method of difference.
    b. The method of residues.
    c. The method of concomitant variation.
    d. The method of agreement.
    e. The joint method of agreement and difference.

    ANS: E PTS: 2

Chapter 10 Test C

MULTIPLE CHOICE

1. When we say that sunshine causes the flowers to bloom, we mean 'cause' in the sense of a:
   a. Relative and an absolute condition.
   b. Necessary and a sufficient condition.
   c. Sufficient but not a necessary condition.
   d. Relative but not an absolute condition.
   e. Necessary but not a sufficient condition.

   ANS: E PTS: 2

2. A condition X is not a sufficient condition for Y if:
   a. X and Y are present together.
   b. X is present when Y is absent.
   c. X is absent when Y is present.
   d. X is relative but Y is absolute.
   e. X and Y are absent together.

   ANS: B PTS: 2

3. A condition X is not a necessary condition for Y if:
   a. X is absent when Y is present.
   b. X and Y are absent together.
   c. X and Y are present together.
   d. X is absolute but Y is relative.
   e. X is present when Y is absent.

   ANS: A PTS: 2

   Table 1C
   Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	*	*	_	*	*	*
2	*	_	*	*	*	_	*
3	*	_	*	*	*	*	*
4	*	*	_	*	*	*	*
5	_	*	*	*	*	_	*
6	*	*	_	*	*	*	*

4. What cause is suggested by the information in Table 1C?
   a. E is a sufficient condition for the phenomenon.
   b. D is a necessary condition for the phenomenon.
   c. E is a necessary condition for the phenomenon.
   d. E is a necessary and sufficient condition for the phenomenon.
   e. A is a sufficient condition for the phenomenon.

   ANS: C PTS: 2

5. What method was used to determine the cause suggested by Table 1C?

a. The method of residues.
b. The method of agreement.
c. The method of difference.
d. The method of concomitant variation.
e. The joint method of agreement and difference.

ANS: B PTS: 2

Table 2C
Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	*	*	*	*	*	*
2	*	_	*	*	*	*	_

6. What cause is suggested by the information in Table 2C?
a. B is a necessary and sufficient condition for the phenomenon.
b. C is a sufficient condition for the phenomenon.
c. B is a necessary condition for the phenomenon.
d. B is a sufficient condition for the phenomenon.
e. C is a necessary condition for the phenomenon.

ANS: D PTS: 2

7. What method was used to determine the cause suggested by Table 2C?
a. The method of concomitant variation.
b. The method of residues.
c. The method of difference.
d. The joint method of agreement and difference.
e. The method of agreement.

ANS: C PTS: 2

Table 3C
Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	_	*	_	*	*	_	_
2	*	*	*	*	_	*	*
3	_	_	*	_	*	*	*
4	_	*	_	_	_	*	_
5	*	*	_	*	*	_	*
6	_	_	*	_	*	*	_

8. What cause is suggested by the information in Table 3C?
a. C is a necessary but not a sufficient condition for the phenomenon.
b. C is a sufficient but not a necessary condition for the phenomenon.
c. F is a necessary but not a sufficient condition for the phenomenon.
d. A is a sufficient but not a necessary condition for the phenomenon.
e. A is a necessary but not a sufficient condition for the phenomenon.

ANS: D PTS: 2

9. What method was used to determine the cause suggested by Table 3C?
   a. The method of difference.
   b. The method of concomitant variation.
   c. The method of agreement.
   d. The method of residues.
   e. The joint method of agreement and difference.

   ANS: E PTS: 2

Table 4C
Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	–	*	*	*	*	–	*
2	*	*	–	*	–	*	–
3	–	*	*	–	*	*	*
4	*	–	*	–	–	*	*
5	–	*	–	*	*	–	–
6	*	–	–	–	*	*	–

10. What cause is suggested by the information in Table 4C?
    a. D is a sufficient but not a necessary condition for the phenomenon.
    b. C is a sufficient and necessary condition for the phenomenon.
    c. B is a necessary but not a sufficient condition for the phenomenon.
    d. E is a sufficient and necessary condition for the phenomenon.
    e. F is a sufficient and necessary condition for the phenomenon.

    ANS: B PTS: 2

Table 5C
Given the following table:

	Possible Conditions						
Occurrence	A	B	C	D	E	F	Phenomenon
1	*	–	*	*	–	*	*
2	–	*	*	–	*	*	*
3	*	–	–	*	–	*	–
4	*	–	*	–	*	–	–
5	*	*	–	*	–	*	*
6	–	*	*	*	–	–	–

11. What cause is suggested by the information in Table 5C?
    a. A is a necessary but not a sufficient condition for the phenomenon.
    b. C is a sufficient but not a necessary condition for the phenomenon.
    c. F is a necessary but not a sufficient condition for the phenomenon.
    d. D is a sufficient but not a necessary condition for the phenomenon.
    e. B is a sufficient and necessary condition for the phenomenon.

    ANS: C PTS: 2

12. Suppose that a sociologist notices a correlation between the rate of personal bankruptcy filings and the suicide rate. As the bankruptcy rate increases, the suicide rare increases, and vice versa. The sociologist concludes that personal bankruptcy is a cause of suicide. What method did the sociologist use in drawing this conclusion?
    a. The method of concomitant variation.
    b. The method of agreement.
    c. The method of difference.
    d. The method of residues.
    e. The joint method of agreement and difference.

    ANS: A PTS: 2

13. Suppose that a homeowner notices a 20 percent increase in the water bill for July. The homeowner traces this increase to four sources: a running toilet, a dripping faucet, a guest who visited for two days, and a broken sprinkler head. Further study shows that the broken toilet accounts for 8 percent of the increase, the faucet 2 percent, and the visiting guest 4 percent. The homeowner concludes that the remaining 8 percent is attributable to the broken sprinkler head. What method did the homeowner use in drawing this conclusion?
    a. The method of agreement.
    b. The joint method of agreement and difference.
    c. The method of difference.
    d. The method of residues.
    e. The method of concomitant variation.

    ANS: D PTS: 2

14. The controlled experiment in science is most closely related to which of Mill's methods?
    a. The method of residues.
    b. The joint method of agreement and difference.
    c. The method of concomitant variation.
    d. The method of agreement.
    e. The method of difference.

    ANS: E PTS: 2

15. The correlational method used in the social sciences is closely related to which of Mill's methods?
    a. The method of agreement.
    b. The method of residues.
    c. The method of concomitant variation.
    d. The joint method of agreement and difference.
    e. The method of difference.

    ANS: C PTS: 2

Chapter 11 Test A

MULTIPLE CHOICE

1. To compute the probability of the LA Lakers defeating the Boston Celtics in their upcoming game, the theory of probability that would typically be used is the:
   a. Relative frequency theory.
   b. Conditional theory.
   c. Classical (*a priori*) theory.
   d. Relativist theory.
   e. Subjectivist theory.

   ANS: E PTS: 2

2. To compute the probability that a mass produced rocket engine would fail prematurely, the theory of probability that would likely be used is the:
   a. Classical (*a priori*) theory.
   b. Relative frequency theory.
   c. Subjectivist theory.
   d. Conditional theory.
   e. Relativist theory.

   ANS: B PTS: 2

3. To compute the probability of drawing a jack and a queen from a poker deck (without replacing the first card before drawing the second) the theory of probability that would likely be used is the:
   a. Relative frequency theory.
   b. Subjectivist theory.
   c. Conditional theory.
   d. Classical (*a priori*) theory.
   e. Relativist theory.

   ANS: D PTS: 2

   Event 1A
   Given the following event:
   Suppose an irregular 4-sided solid object, having sides numbered 1 through 4, is rolled 100 times, and side 3 turns up 28 times.

4. What is the approximate probability of Event 1A happening?
   a. 3/28
   b. 7/25
   c. 7/32
   d. 1/7
   e. 3/7

   ANS: B PTS: 2

5. In regard to Event 1A , what are the odds?
   a. 7 to 18
   b. 7 to 32
   c. 7 to 25
   d. 3 to 28
   e. 1 to 7

ANS: A PTS: 2

6. If the odds of the Dodgers defeating the Astros are 4 to 5, what is the probability of this event happening?
   a. .20
   b. 5/9
   c. 4/9
   d. .50
   e. .80

   ANS: C PTS: 2

7. What is the probability of drawing either an ace or a king from a poker deck (no jokers) on a single draw?
   a. 1/52
   b. 1/26
   c. 1/13
   d. 2/13
   e. 1/4

   ANS: D PTS: 2

8. Given an urn containing 2 pink balls, 3 green balls, and 5 yellow balls. What is the probability of drawing either a green ball or a yellow ball on a single draw?
   a. 2/25
   b. 3/20
   c. 3/4
   d. 9/10
   e. 4/5

   ANS: E PTS: 2

9. What is the probability of getting at least 1 head on 5 successive tosses of a coin?
   a. 3/4
   b. 7/8
   c. 31/32
   d. 5/8
   e. 15/16

   ANS: C PTS: 2

10. Given an urn containing 4 green balls and 5 orange balls. If two balls are drawn and the first ball is not replaced before the second is drawn, what is the probability that both balls are green?
    a. 7/18
    b. 1/6
    c. 4/27
    d. 7/17
    e. 16/81

    ANS: B PTS: 2

11. On one roll of a pair of dice, what is the probability of the points adding up to 6?
    a. 5/36
    b. 1/9
    c. 1/6

d. 7/36
e. 2/9

ANS: A PTS: 2

Event 2A
Given the following event:
Given an urn containing 2 black, 3 yellow, and 5 orange balls. Two balls are drawn and the first ball is not replaced before the second is drawn.

12. Given Event 2A, what is the probability that the first ball is orange and the second is yellow?
a. 1/25
b. 1/3
c. 3/20
d. 1/6
e. 1/5

ANS: D PTS: 2

13. Given Event 2A, what is the probability that the two balls are the same color?
a. 7/25
b. 19/45
c. 14/45
d. 8/25
e. 1/4

ANS: C PTS: 2

Event 3A
Given the following event:
Given two urns, one containing 2 green, 3 yellow, and 5 pink balls, and the other containing 4 green, 2 yellow, and 4 pink balls. A single ball is drawn from each.

14. Given Event 3A, what is the probability that one is green, the other is pink?
a. 1/4
b. 2/3
c. 8/25
d. 47/50
e. 7/25

ANS: E PTS: 2

15. Given Event 3A, what is the probability that at least one is either green or yellow?
a. 4/5
b. 4/25
c. 1/5
d. 21/25
e. 67/100

ANS: A PTS: 2

Chapter 11 Test B

MULTIPLE CHOICE

1. To compute the probability of having a loaded die turn up six, the theory of probability that would normally be used is the:
   a. Relative frequency theory.
   b. Classical (*a priori*) theory.
   c. Subjectivist theory.
   d. Conditional theory.
   e. Relativist theory.

   ANS: A PTS: 2

2. To compute the probability of the Chargers football team beating the Patriots, the theory of probability that would normally be used is the:
   a. Relativist theory.
   b. Conditional theory.
   c. Classical (*a priori*) theory.
   d. Subjectivist theory.
   e. Relative frequency theory.

   ANS: D PTS: 2

3. To compute the probability of drawing two aces from a poker deck (without replacing the first card before drawing the second) the theory of probability that would normally be used is the:
   a. Conditional theory.
   b. Subjectivist theory.
   c. Classical (*a priori*) theory.
   d. Relative frequency theory.
   e. Relativist theory.

   ANS: C PTS: 2

   Event 1B
   Given the following event:
   Suppose an irregular 7-sided solid object, having sides numbered 1 through 7, is rolled 100 times, and side 4 turns up 12 times.

4. What is the approximate probability of Event 1B happening?
   a. .33
   b. .12
   c. 1/12
   d. 1/7
   e. 7/12

   ANS: B PTS: 2

5. In regard to Event 1B, what are the odds?
   a. 1 to 4.
   b. 7 to 100.
   c. 7 to 125.
   d. 3 to 25.
   e. 3 to 22.

ANS: E PTS: 2

6. If the odds of the Yankees beating the Red Sox are 5 to 3, what is the probability of this event happening?
   a. 1/8
   b. 5/8
   c. 3/5
   d. 3/8
   e. 5/3

   ANS: B PTS: 2

7. What is the probability of drawing a black jack from a poker deck (no jokers) on a single draw?
   a. 2/13
   b. 1/4
   c. 1/26
   d. 1/13
   e. 1/52

   ANS: C PTS: 2

8. Given an urn containing 4 red balls, 2 blue balls, and 3 yellow balls. What is the probability of drawing either a red ball or a blue ball on a single draw?
   a. 2/3
   b. 1/2
   c. 8/9
   d. 1/3
   e. 4/9

   ANS: A PTS: 2

9. What is the probability of getting at least 1 head on 3 successive tosses of a coin?
   a. 1/8
   b. 3/4
   c. 5/8
   d. 15/16
   e. 7/8

   ANS: E PTS: 2

10. Given an urn containing 3 red balls and 4 white balls. If two balls are drawn and the first ball is not replaced before the second is drawn, what is the probability that both balls are red?
    a. 2/7
    b. 7/12
    c. 1/6
    d. 1/7
    e. 1/5

    ANS: D PTS: 2

11. On one roll of a pair of dice, what is the probability of the points adding up to 5?
    a. 1/3
    b. 1/9
    c. 1/12
    d. 5/36

e. 2/9

ANS: B PTS: 2

Event 2B
Given the following event:
Given an urn containing 2 green, 3 white, and 4 red balls. Two balls are drawn and the first ball is not replaced before the second is drawn.

12. Given Event 2B, what is the probability that the first ball is white and the second is red?
    a. 2/3
    b. 7/17
    c. 4/27
    d. 1/6
    e. 2/9

    ANS: D PTS: 2

13. Given Event 2B, what is the probability that the two balls are the same color?
    a. 1/3
    b. 2/9
    c. 5/18
    d. 1/6
    e. 5/9

    ANS: C PTS: 2

Event 3B
Given the following event:
Given two urns, one containing 1 yellow, 3 red, and 5 blue balls, and the other containing 4 yellow, 2 red, and 3 blue balls. A single ball is drawn from each.

14. Given Event 3B, what is the probability that one is red, the other is blue?
    a. 2/3
    b. 3/27
    c. 77/81
    d. 19/81
    e. 1/3

    ANS: D PTS: 2

15. Given Event 3B, what is the probability that at least one is either yellow or red?
    a. 7/9
    b. 5/27
    c. 1/3
    d. 2/3
    e. 22/27

    ANS: E PTS: 2

Chapter 11 Test C

MULTIPLE CHOICE

1. To compute the probability of having a fair coin turn up heads four times on four tosses, the theory of probability that would normally be used is the:
   a. Conditional theory.
   b. Classical (*a priori*) theory.
   c. Subjectivist theory.
   d. Relative frequency theory.
   e. Relativist theory.

   ANS: B PTS: 2

2. According to the principle of indifference,
   a. All possible outcomes of an event are equally probable.
   b. It makes no difference who conducts the experiment.
   c. Some possible outcomes are so unlikely that they are ignored.
   d. All possible outcomes are invariant as to time and place.
   e. The probability of an event is the same regardless of what theory is used to calculate it.

   ANS: A PTS: 2

3. To compute the probability of one team winning against another in a sporting event, the theory of probability that would normally be used is the:
   a. Classical (*a priori*) theory.
   b. Conditional theory.
   c. Subjectivist theory.
   d. Relativist theory.
   e. Relative frequency theory.

   ANS: C PTS: 2

   Event 1C
   Given the following event:
   Suppose an irregular 5-sided solid object, having sides numbered 1 through 5, is rolled 100 times, and side 3 turns up 16 times.

4. What is the approximate probability of Event 1C happening?
   a. .08
   b. .32
   c. 1/16
   d. .20
   e. .16

   ANS: E PTS: 2

5. In regard to Event 1C, what are the odds?
   a. 5 to 21.
   b. 5 to 16.
   c. 4 to 25.
   d. 4 to 21.
   e. 3 to 16.

ANS: D PTS: 2

6. If the odds of the Steelers beating the Chiefs are 7 to 4, what is the probability of this event happening?
   a. 4/7
   b. 1/11
   c. 7/11
   d. 4/11
   e. 7/4

   ANS: C PTS: 2

7. What is the probability of drawing a red king from a poker deck (no jokers) on a single draw?
   a. 1/4
   b. 1/26
   c. 1/52
   d. 1/13
   e. 2/13

   ANS: B PTS: 2

8. Given an urn containing 3 red balls, 4 green balls, and 5 yellow balls. What is the probability of drawing either a red ball or a green ball on a single draw?
   a. 7/12
   b. 1/2
   c. 2/5
   d. 2/3
   e. 3/7

   ANS: A PTS: 2

9. What is the probability of getting at least 1 head on 4 successive tosses of a coin?
   a. 31/32
   b. 7/8
   c. 3/4
   d. 13/16
   e. 15/16

   ANS: E PTS: 2

10. What is the probability of drawing two hearts from a poker deck (no jokers) if the first card is not replaced before the second is drawn?
    a. 13/51
    b. 1/16
    c. 13/52
    d. 1/17
    e. 1/32

    ANS: D PTS: 2

11. On one roll of a pair of dice, what is the probability of the points adding up to 4?
    a. 1/12
    b. 1/6
    c. 1/11
    d. 1/9
    e. 1/8

ANS: A PTS: 2

Event 2C
Given the following event:
Given two urns, one containing 3 white, 4 blue, and 5 pink balls, and the other containing 2 white, 3 blue, and 7 pink balls. A single ball is drawn from each.

12. Given Event 2C, what is the probability that at least one ball is blue?
    a. 5/12
    b. 7/12
    c. 1/2
    d. 11/24
    e. 3/8

    ANS: C PTS: 2

13. Given Event 2C, what is the probability that both balls are pink?
    a. 17/72
    b. 35/144
    c. 19/72
    d. 1/4
    e. 2/7

    ANS: B PTS: 2

Event 3C
Given the following event:
Given an urn containing 3 white, 4 blue, and 5 pink balls. Two balls are drawn and the first ball is not replaced before the second is drawn.

14. Given Event 3C, what is the probability that both balls are blue?
    a. 7/132
    b. 1/12
    c. 1/9
    d. 2/25
    e. 1/11

    ANS: E PTS: 2

15. Given Event 3C, what is the probability that at least one ball is either white or blue?
    a. 9/11
    b. 119/144
    c. 10/72
    d. 28/33
    e. 29/33

    ANS: D PTS: 2

Chapter 12 Test A

MULTIPLE CHOICE

1. Suppose a poll is taken to determine voter attitude about increasing the state income tax in exchange for increased social services (including welfare). If the poll is confined primarily to the poorer neighborhoods of the state, what results can be expected?
   a. The poll would be biased against an increase in the state income tax.
   b. The people interviewed would not be candid with their answers.
   c. The people would refuse to speak to the interviewer.
   d. The poll would be biased in favor of increased social services.
   e. The responses would accurately reflect the opinion of the state's population.

   ANS: D PTS: 2

2. In a poll about creating a publicly funded healthcare program, suppose the question is asked, "Should free healthcare be given to people who are too lazy to work and who have never paid any taxes?" Can the answers to this question be trusted?
   a. No, because the question is biased in favor of a negative answer.
   b. Yes, because most people are inclined to answer truthfully in a poll.
   c. Yes, because the phrasing of a question rarely affects the answer.
   d. No, because the question is ambiguous.
   e. Yes, if the poll is random.

   ANS: A PTS: 2

3. In regard to the outcome of a poll, as the confidence level increases,
   a. The more difficult it becomes to avoid atypical cases.
   b. The standard deviation becomes smaller.
   c. The margin of error increases.
   d. The standard deviation becomes greater.
   e. The margin of error decreases.

   ANS: C PTS: 2

4. Suppose a poll shows Smith leading Jones by 52 percent to 48 percent for U.S. Senate. What can be said about the results of this poll?
   a. If the margin of error is $\pm$ 1 percent, then Smith is certainly ahead of Jones.
   b. If the margin of error is more than $\pm$ 2 percent, then Jones might lead Smith.
   c. If the sample is random, then the results of the poll are unimpeachable.
   d. If the confidence level is 99 percent, then Smith is certainly ahead of Jones.
   e. If the margin of error is $\pm$ 3 percent, then Jones is ahead of Smith.

   ANS: B PTS: 2

5. Suppose you are the pilot of a small commercial airplane, and you want to ensure that the plane will carry the load. What statistic would be most useful to you?
   a. The mean weight of the passengers.
   b. The median weight of the passengers.
   c. The modal weight of the passengers.
   d. The dispersion of the data representing the weight of the passengers.
   e. The standard deviation of the data representing the weight of the passengers.

   ANS: A PTS: 2

6. Suppose that the costs of operating a factory that manufactures copper pipe increase by the following amounts: copper: 6%, labor: 5%, electricity: 4%, taxes: 2%, repairs and maintenance: 3%. By how much have the costs of manufacturing the pipe increased?
   a. 20%
   b. 4%
   c. 6%
   d. Less than 2%.
   e. Less than 6%.

   ANS: E PTS: 2

7. The range of a set of data is:
   a. The difference between the modal value and the mean value.
   b. A measure of how much the data differ from the mean value.
   c. The difference between the largest and smallest values.
   d. A measure of how much the data differ from the median value.
   e. The difference between the median value and the mean value.

   ANS: C PTS: 2

8. One way that pictograms can distort a message is by:
   a. Using pastel colors to create the pictogram.
   b. Using fluorescent colors to create the pictogram.
   c. Blurring the lines of the pictogram.
   d. Ignoring the visual effect of a three dimensional image.
   e. Chopping off the bottom of the pictogram.

   ANS: D PTS: 2

9. If the variance of a set of data is relatively large, then:
   a. The standard deviation diverges from the variance.
   b. The data tend to be more spread out from the mean point.
   c. The sample does not accurately represent the population.
   d. The population from which the data are extracted tends to be large.
   e. Most of the data fall close to the mean point.

   ANS: B PTS: 2

10. Suppose, to select a sample from a population of 3000 persons, the following procedure is followed. The names of the people are written on identical, square pieces of thin cardboard measuring one inch on a side, and these pieces of cardboard are then tumbled in a clothes dryer (with the heat shut off). After 30 minutes, a blindfolded person reaches in and withdraws a selected number of names. What can be said about this sample?
    a. The sample is probably biased because clothes dryers are not supposed to be used in collecting samples.
    b. The sample is probably biased because people with shorter names would be selected first.
    c. The sample is probably biased because the names on the top of the heap would be selected first.
    d. The sample is probably biased because the names toward the front of the dryer would probably be selected first.
    e. The sample is almost certainly random.

    ANS: E PTS: 2

Data Set 1A
Suppose that the following table represents the length of service (in years) of the employees of a business:

Number of Employees	Years
1	1
6	2
1	3
3	4
4	5

11. Given Data Set 1A, what is the mean length of service of the employees?
    a. 3 years.
    b. 2.5 years.
    c. 3.2 years.
    d. 4 years.
    e. 3.5 years.

    ANS: C PTS: 2

12. Given Data Set 1A, what is the median length of service?
    a. 3 years.
    b. 3.5 years.
    c. 2 years.
    d. 3 years.
    e. 6 years.

    ANS: A PTS: 2

13. Given Data Set 1A, what is the modal length of service?
    a. 4 years.
    b. 6 years.
    c. 5 years.
    d. 3 years.
    e. 3.5 years.

    ANS: B PTS: 2

Data Set 2A
Suppose that the ages of 8 kittens in a pet shop are as follows:
1, 2, 2, 3, 3, 4, 4, 5

14. What is the variance for Data Set 2A?
    a. 1
    b. 2
    c. $\sqrt{1.5}$
    d. 1.5
    e. 2.5

    ANS: D PTS: 2

15. For Data Set 2A, what is the standard deviation?
    a. $\sqrt{2}$
    b. 1

c. 1.5
d. 2
e. $\sqrt{1.5}$

ANS: E PTS: 2

Chapter 12 Test B

MULTIPLE CHOICE

1. Suppose a poll is taken to sample voter preferences in an upcoming presidential election. To conduct the poll, an interviewer standing on a street corner in the financial district of a large city asks questions of people as they pass by. What result would be expected from such a poll?
   a. The people on the street corner would refuse to speak to the interviewer.
   b. The people interviewed would not be candid with their answers.
   c. The responses would be biased in favor of the Democratic candidate.
   d. The responses would be biased in favor of the Republican candidate.
   e. The responses would accurately predict the outcome of the election.

   ANS: D PTS: 2

2. Suppose that a poll is taken about how marriage partners relate to each other, and one of the questions asked is if the person being interviewed has ever lied to his/her spouse. Can the responses to this question be trusted?
   a. Yes, because the question is very straightforward.
   b. Yes, because most people are inclined to answer truthfully in a poll.
   c. No, because interviewers who have lied to their spouse would probably deny it.
   d. No, because the question is ambiguous.
   e. Yes, because the vast majority of marriage partners do not lie to their spouse.

   ANS: C PTS: 2

3. One of the problems with the *Literary Digest* poll taken prior to the 1936 presidential election was:
   a. Many of the people in the population could not afford a telephone.
   b. The sample size was too small.
   c. The population was too large.
   d. The responses were biased because of the way the questions were phrased.
   e. Most people were not at home at the time the calls were made.

   ANS: A PTS: 2

4. In general, the larger a sample is:
   a. The smaller the standard deviation becomes.
   b. The more likely it is that it will be biased.
   c. The more difficult it becomes to avoid atypical cases.
   d. The greater the standard deviation becomes.
   e. The more closely it represents the population.

   ANS: E PTS: 2

5. In a normal distribution, the data represented are:
   a. Skewed away from the median point.
   b. Skewed toward the mean point.
   c. Random.
   d. Trustworthy.
   e. Shaped like a triangle.

   ANS: C PTS: 2

6. One way of exaggerating fluctuations in the price of a company's stock is to:

a. Contract the horizontal scale.
b. Chop off the bottom of the graph and expand the vertical scale.
c. Chop off the top of the graph and expand the horizontal scale.
d. Use a thicker line to represent the fluctuations.
e. Alter the background color of the graph.

ANS: B PTS: 2

7. Suppose that you want to buy a pair of size 9 shoes, and you are told that the average size of the shoes in Bob's Shoe Store are size 9. Under what circumstances is this information useful to you?
a. The shoes reflect the latest fashions.
b. The standard deviation is relatively large.
c. The average is a mean.
d. The average is a modal average.
e. The average is a median.

ANS: D PTS: 2

8. If the standard deviation of a set of data is relatively small, then:
a. The sample does not accurately represent the population.
b. The standard deviation diverges from the variance.
c. The data tend to be spread out from the median point.
d. The population from which the data are extracted tends to be large.
e. Most of the data fall close to the mean point.

ANS: E PTS: 2

9. Suppose that the costs of operating a certain restaurant increase by the following amounts: food: 4%, labor: 5%, electricity: 3%, taxes: 2%, repairs and maintenance: 4%. By how much have the costs of operating the restaurant increased?
a. 18%
b. Less than 5%.
c. The modal average of the increases for these five items.
d. Less than 2%.
e. More than 18%.

ANS: B PTS: 2

10. Suppose that for a large population, the margin of error of Poll A is 2%, and the margin of error of Poll B is 4%. Then,
a. The sample used in Poll A is much larger than the sample used in Poll B.
b. The sample used in Poll A is slightly larger than the sample used in Poll B.
c. The sample used in Poll B is much larger than the sample used in Poll A.
d. The sample used in Poll B is slightly larger than the sample used in Poll A.
e. The difference in sampling error is unrelated to the size of the samples.

ANS: A PTS: 2

Data Set 1B
Suppose that the following table represents the age of the cars in a small used car lot:

Number of Cars	Age
2	1
4	2

1	3
5	4
1	6

11. Given Data Set 1B, what is the mean age of the cars?
    a. 2 years.
    b. 2.5 years.
    c. 3 years.
    d. 4 years.
    e. 3.5 years.

    ANS: C PTS: 2

12. Given Data Set 1B, what is the median age of the cars?
    a. 4 years.
    b. 3.5 years.
    c. 5 years.
    d. 3 years.
    e. 6 years.

    ANS: D PTS: 2

13. Given Data Set 1B, what is the modal age of the cars?
    a. 5 years.
    b. 4 years.
    c. 6 years.
    d. 3 years.
    e. 3.5 years.

    ANS: B PTS: 2

Data Set 2B
Suppose that the height (in meters) of 6 fir trees in the garden department of a store are as follows:
1, 2, 2, 4, 4, 5

14. What is the variance for Data Set 2B?
    a. $\sqrt{2}$
    b. 1.5
    c. 2.5
    d. 1
    e. 2

    ANS: E PTS: 2

15. For Data Set 2B, what is the standard deviation?
    a. $\sqrt{2}$
    b. 1
    c. 1.3
    d. 2
    e. $\sqrt{1.5}$

    ANS: A PTS: 2

Chapter 12 Test C

MULTIPLE CHOICE

1. Suppose a quality control inspector pulls every tenth can of soup from a conveyor belt to ensure that the cans are filled to capacity. How should this procedure be evaluated?
   a. The sample may not be a random sample.
   b. The procedure is defective because it fails to specify which can is selected first.
   c. The procedure guarantees that the sample is a random sample.
   d. The sample is not large enough for the kind of test being done.
   e. The procedure calls for an excessively large sample.

   ANS: A PTS: 2

2. A sample that is not representative of the population from which it is drawn is said to be:
   a. Compromised.
   b. Distorted.
   c. Biased.
   d. Contaminated.
   e. Unresponsive.

   ANS: C PTS: 2

3. Suppose that a survey is taken of the adult residents of a town, and one of the questions asked is whether the person responding graduated from high school. Can the responses to this question be trusted?
   a. Yes, because the question is very straightforward.
   b. No, because the number of 'yes' answers would probably be skewed upward.
   c. Yes, because the respondents are adults.
   d. No, because the number of 'yes' answers would probably be skewed downward.
   e. No, because most of the respondents would refuse to answer this question.

   ANS: B PTS: 2

4. Suppose two simultaneous random surveys were taken of a mid sized city to determine public acceptance of a proposed ballot measure. Survey X covered 1000 voters, and Survey Y covered 2000 voters. How would you expect the surveys to compare for accuracy?
   a. There is no way of knowing how the two surveys compare.
   b. The two surveys are equally accurate.
   c. Survey Y is 4 times more accurate than Survey X.
   d. Survey Y is twice as accurate as Survey X
   e. Survey Y is probably about one percentage point more accurate than Survey X.

   ANS: E PTS: 2

5. Suppose that a biologist took water samples at random intervals from a rapidly flowing creek to test for contaminants. A sample was taken at a single location from the center of the creek for one year. Could such a survey be depended on?
   a. Yes, because contaminants in the creek would not change from day to day.
   b. No, because all the samples were taken from the center of the creek.
   c. No, because a sample must be taken every day.
   d. Probably.
   e. No, because all the samples were taken from a single location.

ANS: D PTS: 2

6. Suppose that the average price of a piece of jewelry at Henry's Jewelers is $200, and Mr. Smith wants to spend approximately that much for his wife's birthday gift. Under what circumstances can Mr. Smith be reasonably assured of a selection of jewelry in his price range?
   a. The average is a mean.
   b. The jeweler has a reputation for selling quality merchandise.
   c. The average is a modal average.
   d. The average is a median.
   e. The pieces of jewelry are reasonably priced.

   ANS: C PTS: 2

7. One way of exaggerating the apparent message conveyed by a bar graph is by:
   a. Altering the vertical scale while leaving the horizontal scale as is.
   b. Altering both the horizontal scale and the vertical scale by the same amount.
   c. Altering the horizontal scale while leaving the vertical scale as is.
   d. Narrowing the width of the bars.
   e. Printing the bars in different colors.

   ANS: A PTS: 2

8. Range, variance, and standard deviation are measurements of:
   a. Gradations of quality.
   b. Sampling error.
   c. Intensity.
   d. Dispersion.
   e. Quantity.

   ANS: D PTS: 2

9. Suppose that two sets of data conform to a normal probability distribution, and that the standard deviation of Set X is 2, while the standard deviation of Set Y is 4. Then,
   a. Set X contains a larger amount of data than set Y.
   b. The curve for Set Y is more flattened and spread out than the curve for Set X.
   c. The variance for both sets of data will be the same.
   d. The curve for Set X is more flattened and spread out than the curve for Set Y.
   e. Set Y contains a larger amount of data than set X.

   ANS: B PTS: 2

10. Suppose that the price of crude oil, the primary raw material for gasoline, increases by 30 percent. Assuming everything else stays the same, by how much has the cost of producing gasoline increased?
    a. 35 percent.
    b. 32 percent.
    c. 30 percent.
    d. More than 35 percent.
    e. Less than 30 percent.

    ANS: E PTS: 2

Data Set 1C
Suppose that the following table represents the age of the houses in a certain neighborhood:

Number of	

Houses	Age
2	1
5	3
1	4
3	6
4	9

11. Given Data Set 1C, what is the mean age of the houses?
    a. 3 years.
    b. 4.6 years.
    c. 5 years.
    d. 4 years.
    e. 5.7 years.

    ANS: C PTS: 2

12. Given Data Set 1C, what is the median age of the houses?
    a. 3 years.
    b. 5.4 years.
    c. 5 years.
    d. 4 years.
    e. 4.6 years.

    ANS: D PTS: 2

13. Given Data Set 1C, what is the modal age of the houses?
    a. 3 years.
    b. 5 years.
    c. 4.3 years.
    d. 4 years.
    e. 3.5 years.

    ANS: A PTS: 2

Data Set 2C
Suppose that the lengths of employment (in years) of 7 employees of a small company are as follows: 1, 2, 2, 3, 4, 4, 5

14. What is the approximate variance for Data Set 2C?
    a. 1.5
    b. 1.7
    c. 2
    d. 1.6
    e. 1.8

    ANS: B PTS: 2

15. For Data Set 2C, what is the approximate standard deviation?
    a. $\sqrt{1.8}$
    b. 1.1
    c. 1.4
    d. 2
    e. $\sqrt{1.7}$

    ANS: E PTS: 2

Chapter 13 Test A

MULTIPLE CHOICE

1. Which of the following problems would likely require a hypothetical explanation?
   a. Why you apply sunscreen when you go to the beach.
   b. Why your gas powered lawnmower refuses to start.
   c. Why you spray fertilizer on the plants in your garden.
   d. Why you get a haircut.
   e. Why the fish you put in the refrigerator a week ago smells bad.

   ANS: B PTS: 2

2. Suppose an implication derived from a hypotheses turns out to be false. This occurrence:
   a. Indicates that the hypothesis was derived inductively.
   b. Shows that the hypothesis should never have been formulated.
   c. Proves that the hypothesis is grounded in defective reasoning.
   d. Indicates that the hypothesis was derived deductively.
   e. Provides evidence that the hypothesis is false.

   ANS: E PTS: 2

3. The key problem underlying the discovery of radium was:
   a. Why certain isotopes of thorium are radioactive.
   b. Why uranium has the power to darken photographic plates.
   c. Why pitchblende emits rays that are stronger than rays emitted by pure uranium.
   d. Why rays emitted by thorium are stronger than rays emitted by uranium.
   e. Why X-rays are stronger than rays emitted by pure uranium.

   ANS: C PTS: 2

4. One of the implications of the radium hypothesis was:
   a. Mixing pure uranium with impurities would increase the emission of rays.
   b. Mixing uranium with radioactive thorium would increase the emission of rays.
   c. Mixing pitchblende with impurities would increase the emission of rays.
   d. An electrometer could be used to measure the intensity of the rays emitted by pitchblende.
   e. An electrometer could be used to measure the intensity of X-rays.

   ANS: A PTS: 2

5. One of the hypotheses involved in the discovery of radium was:
   a. Pure uranium contained an unknown element later known as radium.
   b. The intense rays emitted by pitchblende were caused by uranium.
   c. The intense rays emitted by pitchblende were caused by impurities in the crystals.
   d. It would be possible to produce a radioactive isotope of barium.
   e. Mendeleev's periodic table of the elements was incorrect in some respects.

   ANS: C PTS: 2

6. An implication of the hypothesis leading to the discovery of Neptune was:
   a. Examination of the orbit of Neptune would reveal the existence of a ninth planet.
   b. A powerful telescope could detect a previously unseen satellite of Uranus.
   c. The gravitational field of Uranus caused perturbations in the orbit of Saturn.
   d. Directing a telescope to a particular region of the sky would reveal a new planet.

e. The combined mass of Neptune and Uranus was less than the mass of Saturn.

ANS: D PTS: 2

7. Prior to the discovery of atmospheric pressure, the failure of wine to pour from the bottom of a barrel unless an opening was made in the top was explained by:
   a. The Empedoclean theory of the four elements.
   b. The Aristotelian theory of natural place.
   c. The fact that all seventeenth century wine barrels were made from oak.
   d. The fact that fermentation produces sediment, which clogs the tap.
   e. The principle that nature abhors a vacuum.

   ANS: E PTS: 2

8. One of the problems that led to the discovery of atmospheric pressure was:
   a. Why Gasparo Berti's experiment worked in Rome but not in Florence.
   b. Why it was impossible to siphon mercury from one container to another.
   c. Why suction pumps failed to work on mountain tops.
   d. Why the water in Gasparo Berti's glass pipe always descended to the same level.
   e. Why water boils at a lower temperature on mountaintops than it does at sea level.

   ANS: D PTS: 2

9. One of the implications of the atmospheric pressure hypothesis was:
   a. It is impossible to produce a pure vacuum.
   b. The pressure of the atmosphere would support a column of mercury about 29 inches high.
   c. The pressure of the atmosphere is higher on mountaintops than it is in valleys.
   d. The pressure of the atmosphere would support a column of water about 29 inches high.
   e. Water freezes at a lower temperature at sea level than it does on mountaintops.

   ANS: B PTS: 2

10. The theory of spontaneous generation held that:
    a. Life arises spontaneously from lifeless matter.
    b. Life arises spontaneously from sexual reproduction.
    c. Life arises spontaneously from various forms of vegetable nutrients.
    d. Life arises only from other forms of life.
    e. Life arises spontaneously from the action of an electric spark on certain amino acids.

    ANS: A PTS: 2

11. One of Pasteur's hypotheses was that:
    a. Boiling a nutrient solution destroyed its "vegetative force."
    b. Worms in rotting meat are caused by flies.
    c. A microscope would reveal multiple life forms in pond water.
    d. Heating oxygen destroyed its capacity to produce life.
    e. Life forms are carried by dust particles in the atmosphere.

    ANS: E PTS: 2

12. An example of an empirical hypothesis is:
    a. Life comes only from life.
    b. Nature abhors a vacuum.
    c. An undiscovered planet is responsible for deviations in the orbit of Uranus.
    d. Life is spontaneously generated from lifeless matter.
    e. Space and time are relative to each other.

ANS: C PTS: 2

13. The ability of Kepler's hypothesis to account for the position of the planets with greater accuracy than Copernicus's relates to the issue of:
    a. External consistency.
    b. Adequacy.
    c. Fruitfulness.
    d. Internal coherence.
    e. Reductivity.

    ANS: B PTS: 2

14. The ability of the atmospheric pressure hypothesis to link the behavior of barometers with the behavior of siphons and vacuum pumps is an illustration of:
    a. Internal coherence.
    b. External consistency.
    c. Fruitfulness.
    d. Adequacy.
    e. Reductivity.

    ANS: A PTS: 2

15. The ability of Pasteur's hypothesis to suggest procedures for maintaining sterile conditions in hospitals is an illustration of:
    a. Internal coherence.
    b. Adequacy.
    c. External consistency.
    d. Fruitfulness.
    e. Reductivity.

    ANS: D PTS: 2

Chapter 13 Test B

MULTIPLE CHOICE

1. Hypothetical reasoning is typically used to produce:
   a. Categorical syllogisms.
   b. Explanations.
   c. Arguments from analogy.
   d. Causal inferences.
   e. Conditional statements.

   ANS: B PTS: 2

2. A hypothesis is:
   a. A conjecture created by the mind of the investigator.
   b. A conclusion derived from the evidence.
   c. A deductive implication from a higher level theory.
   d. A prediction derived from prior observations.
   e. A refined observation suggested by preliminary observations.

   ANS: A PTS: 2

3. If an implication derived from a hypothesis turns out to be true, then:
   a. The implication is used to test other hypotheses.
   b. The hypothesis is proven to be true.
   c. The hypothesis becomes a law.
   d. The hypothesis is usually discarded.
   e. The hypothesis is inductively supported.

   ANS: E PTS: 2

4. Marie Curie discovered radium by breaking down:
   a. Polonium.
   b. Uranium.
   c. Thorium.
   d. Pitchblende.
   e. Plutonium.

   ANS: D PTS: 2

5. In regard to the discovery of Neptune, the work of Adams and Leverrier:
   a. Told astronomers where to look for the new planet.
   b. Predicted the color of the new planet.
   c. Predicted the mineral composition of the new planet.
   d. Served to correct errors in the calculated orbit of Uranus.
   e. Revealed for the first time the gravitational interaction between Uranus, Jupiter, and Saturn.

   ANS: A PTS: 2

6. Prior to the discovery of atmospheric pressure, the operation of siphons was explained by the principle that:
   a. Water is naturally drawn into a region of least pressure.
   b. The water in siphons is supported by demons.

c. Nature abhors a vacuum.
d. Water rises in an open tube by capillary action.
e. Higher pressure results in a greater volume of flow.

ANS: C PTS: 2

7. One of the implications of the atmospheric pressure hypothesis is that:
a. A properly constructed vacuum pump would operate to a height of about 45 feet.
b. The atmosphere would support a column of mercury to a height of about 29 inches.
c. Storms are always accompanied by an increase in atmospheric pressure.
d. Barometers do not work as well on mountain tops as they do at sea level.
e. Water boils at a higher temperature on mountain tops than it does at sea level.

ANS: B PTS: 2

8. Prior to the work of Louis Pasteur, the emergence of organisms such as worms, frogs, and eels was explained by:
a. The theory that nature abhors a vacuum.
b. The theory that organisms of this sort are causes by flies.
c. The theory that organisms of this sort are caused by cosmic dust.
d. The theory of spontaneous generation.
e. Aristotle's theory of hylomorphism.

ANS: D PTS: 2

9. The biologist John Needham hypothesized that:
a. Life is created through the agency of hydrogen.
b. Life comes only from life.
c. Life is created by the action of oxygen on a nutrient solution.
d. The seeds of all living forms are hidden in water.
e. Microbes are deposited in nutrient solutions by dust particles in the air.

ANS: C PTS: 2

10. The hypotheses leading to the discovery of Neptune and Radium can be called:
a. Conditional hypotheses.
b. Theoretical hypotheses.
c. Astronomical hypotheses.
d. Conceptual hypotheses.
e. Empirical hypothesis.

ANS: E PTS: 2

11. One problem relating to the proof of hypotheses is that:
a. Observation is theory dependent.
b. Hypotheses are not observable things.
c. Every hypothesis is eventually disproved.
d. The number of implications derivable from a hypothesis is limited.
e. Most hypotheses entail inconsistent implications.

ANS: A PTS: 2

12. Because Einstein's theory of relativity accounted for the precise time of certain eclipses with greater accuracy than did Newton's theory, Einstein's theory is:
a. More externally consistent.
b. More adequate.

c. More fruitful.
d. More internally coherent
e. More rational.

ANS: B PTS: 2

13. In relation to earlier theories, Maxwell's theory of the electromagnetic field, which unified the phenomena of light, electricity, and magnetism, is:
a. More externally consistent.
b. More adequate.
c. More fruitful.
d. More internally coherent.
e. More phenomenalistic.

ANS: D PTS: 2

14. The agreement of Marie Curie's hypothesis about the existence of radium with Mendeleev's periodic table of the elements is an illustration of:
a. Predictability.
b. Internal coherence.
c. Fruitfulness.
d. Adequacy.
e. External consistency.

ANS: E PTS: 2

15. The ability of Torricelli's hypothesis about atmospheric pressure to suggest the design of the barometer is an illustration of:
a. External consistency.
b. Internal coherence.
c. Fruitfulness.
d. Predictability.
e. Adequacy.

ANS: C PTS: 2

Chapter 13 Test C

MULTIPLE CHOICE

1. Hypothetical reasoning is used to produce an explanation for the occurrence of a phenomenon when:
   a. The phenomenon is not observable.
   b. The reason for its occurrence is incomprehensible.
   c. The phenomenon is not measurable.
   d. The reason for its occurrence is not immediately observable.
   e. The reason for its occurrence lies outside the realm of science.

   ANS: D PTS: 2

2. Which of the following is NOT involved in the hypothetical method?
   a. The occurrence of a problem.
   b. Drawing implications from the hypothesis.
   c. Attempting to falsify the hypothesis.
   d. Testing the implications.
   e. Formulating a hypothesis.

   ANS: C PTS: 2

3. Suppose that a detective formulates the hypothesis that a pair of gloves found at the scene of a burglary belongs to the burglar. Such a hypothesis is called:
   a. An empirical hypothesis.
   b. A tentative hypothesis.
   c. A theoretical hypothesis.
   d. A conjectural hypothesis.
   e. An investigational hypothesis.

   ANS: A PTS: 2

4. Suppose an implication is derived from a hypothesis, and the implication turns out to be true. This fact:
   a. Makes the hypothesis easier to understand.
   b. Tends to confirm the hypothesis.
   c. Proves the hypothesis true.
   d. Sheds light on the hypothesis.
   e. Has no effect on the acceptability of the hypothesis.

   ANS: B PTS: 2

5. One of the functions of a hypothesis is to:
   a. Close the gap between fact and theory.
   b. Eliminate the need for evidence.
   c. Introduce certainty into science.
   d. Eliminate the need for an explanation.
   e. Direct the search for evidence.

   ANS: E PTS: 2

6. A key discovery underlying Marie Curie's hypothesis about radium was that:
   a. Pitchblende emits less radiation than pure uranium.
   b. Thorium emits more radiation than pitchblende.
   c. Pitchblende emits more radiation than pure uranium.

d. Pitchblende emits more radiation than radium.
e. Radium emits more radiation than thorium.

ANS: C PTS: 2

7. The underlying problem that led to the discovery of Neptune was:
   a. Why the orbital path of Uranus deviated from what was predicted.
   b. Why the orbit of Uranus is elliptical.
   c. Why the orbital path of Saturn deviated from what was predicted.
   d. Why the moons of Jupiter failed to influence the rotation of Jupiter.
   e. Why Saturn has a greater mass than Uranus.

   ANS: A PTS: 2

8. One of the underlying problems that led to the discovery of atmospheric pressure was:
   a. Why barometers work better on mountain tops than they do in valleys.
   b. Why vacuum pumps were more effective than siphons.
   c. Why it is harder to open a wine barrel in the winter than in the summer.
   d. Why siphons would not work beyond certain height limitations.
   e. Why fermentation occurs more rapidly in sealed containers than in open containers.

   ANS: D PTS: 2

9. Pasteur's hypothesis involving spontaneous generation was:
   a. Life arises from the application of heat to nutrient solutions.
   b. Life comes only from life.
   c. Primitive life forms are present in yeast.
   d. Life forms are present in the tails of comets.
   e. Life arises from the spontaneous synthesis of organic chemicals.

   ANS: B PTS: 2

10. One of the hypotheses Pasteur offered to explain the emergence of microbes in sterilized nutrient solutions was that:
    a. Microbes were deposited by dust particles in the air.
    b. Temperature resistant spores were present in the solution prior to boiling.
    c. Microbes arose from the agency of oxygen on the solution.
    d. The container holding the solution had not been properly sanitized.
    e. Microbes arose from a chemical reaction in the solution.

    ANS: A PTS: 2

11. Hypotheses that concern how something should be conceptualized are called:
    a. Psychological hypotheses.
    b. Scientific hypotheses.
    c. Conceptual hypotheses.
    d. Empirical hypotheses.
    e. Theoretical hypotheses.

    ANS: E PTS: 2

12. How well a hypothesis fits the facts it is intended to explain is a measure of its:
    a. Fruitfulness.
    b. External consistency.
    c. Adequacy.
    d. Internal coherence.

e. Rationality.

ANS: C PTS: 2

13. How well the component ideas in a hypothesis are interconnected is a measure of that hypothesis's:
a. Fruitfulness.
b. Internal coherence.
c. Adequacy.
d. Dependability.
e. External consistency.

ANS: B PTS: 2

14. The degree to which a hypothesis does not conflict with other, well established hypotheses is a measure of its:
a. External consistency.
b. Respectability.
c. Internal coherence.
d. Fruitfulness.
e. Adequacy.

ANS: A PTS: 2

15. The extent to which a hypothesis suggests new ideas for future analysis and confirmation is a measure of its:
a. Internal coherence.
b. Adequacy.
c. Fruitfulness.
d. External consistency.
e. Rationality.

ANS: C PTS: 2

Chapter 14 Test A

MULTIPLE CHOICE

1. Statements from the Bible about the natural world do not count as scientific evidence because:
   a. The people responsible for these claims are all dead.
   b. They are always infected with theological claims.
   c. There is no way of determining whether these statements are true.
   d. They are not expressed in the language of mathematics.
   e. They are usually expressed in metaphorical language.

   ANS: C PTS: 2

2. Superstitious claims are usually expressed in vague language. As a result:
   a. They engage only the emotions and never the intellect.
   b. It is often difficult to distinguish one such claim from another.
   c. Scientists have no interest in them.
   d. It is usually impossible to subject them to empirical test.
   e. They lend themselves too readily to *ad hoc* modifications.

   ANS: D PTS: 2

3. According to Karl Popper, genuinely scientific hypotheses must be:
   a. Falsifiable.
   b. Testable.
   c. Flexible.
   d. Verifiable.
   e. Applicable.

   ANS: A PTS: 2

4. Modifications that are made to hypotheses to allow for unexpected or unfavorable pieces of evidence are called:
   a. Ad hoc modifications.
   b. Hypothetical expansions.
   c. Moot hypotheses.
   d. Explanatory mutations.
   e. Ex post facto modifications.

   ANS: E PTS: 2

5. As a result of the application of Ockham's razor, naturalistic explanations are preferred to supernatural explanations because:
   a. Naturalistic explanations lead to entirely new ways of viewing the world.
   b. Naturalistic explanations are preferred by atheists.
   c. Supernatural explanations are inconsistent with well confirmed scientific theories.
   d. Supernatural explanations are always contaminated by religious beliefs.
   e. Supernatural explanations introduce a whole new set of entities into the picture.

   ANS: D PTS: 2

6. According to Imre Lakatos and Paul Thagard, science is distinguished from pseudoscience in that science is:
   a. Directional.

b. Progressive.
c. Rational.
d. Developmental.
e. Instructive.

ANS: B PTS: 2

7. One source of support for superstitious hypotheses is:
a. Satanic influences in the world.
b. The universal desire to advance oneself in the world.
c. The desire to know.
d. The belief in an afterlife.
e. The love many people have for the magical and fantastic.

ANS: E PTS: 2

8. The apparent power of a mere sugar pill to cure numerous bodily ailments is called:
a. Confabulation.
b. Pareidolia.
c. The placebo effect.
d. The autokinetic effect.
e. The hypnagogic effect.

ANS: C PTS: 2

9. The effect by which people recognize images (such as faces or animals) in clouds or other media is called:
a. Pareidolia.
b. Psychedelia.
c. Kinesthesia.
d. Echolalia.
e. Precognition.

ANS: A PTS: 2

10. The experiment by Bruner and Postman involving an altered deck of playing cards tends to prove that:
a. There is a difference between perception and sensation.
b. We see what we expect to see.
c. We see what other people want us to see.
d. What we see is affected by ambient lighting conditions.
e. Partial colorblindness is widespread.

ANS: B PTS: 2

11. Hallucinations that occur just as people are drifting off to sleep are called:
a. Soporific hallucinations.
b. Epicyclic delusions.
c. Hypnagogic hallucinations.
d. Hypnotic delusions.
e. Episodic delusions.

ANS: C PTS: 2

12. The process by which the brain fills in gaps in memory images is called:
a. Pareidolia.
b. Articulation.

c. Synthesis.
d. Confabulation.
e. Analysis.

ANS: D PTS: 2

13. When astrological predictions fail to materialize, the community of astrologers typically responds by:
a. Ignoring them.
b. Reexamining the positions of the planets at the pertinent times.
c. Recasting the astrological charts.
d. Rereading ancient astrological texts.
e. Resetting the astrological clocks.

ANS: A PTS: 2

14. The absence of any astrological explanation as to how the planets can affect people's lives amounts to:
a. An adequacy problem.
b. An empirical problem.
c. A problem with fruitfulness.
d. An external consistency problem.
e. A coherence problem.

ANS: E PTS: 2

15. The Maharishi Mahesh Yogi claimed that some practitioners of transcendental meditation were able to:
a. Read other peoples' minds.
b. Levitate.
c. Bend spoons and other objects by merely stroking them.
d. Find sources of water by using a diving rod.
e. Practice "cold reading."

ANS: B PTS: 2

Chapter 14 Test B

MULTIPLE CHOICE

1. One of the reasons anecdotal evidence is considered unreliable is that:
   a. It is often the result of hallucinations.
   b. People tend to lie about this kind of evidence.
   c. It is not replicable.
   d. Reports of anecdotal evidence are often vaguely worded.
   e. Subjects often report anecdotal evidence for emotional reasons.

   ANS: C PTS: 2

2. One of the problems about superstitions relating to good luck is that:
   a. Good luck can always be followed by bad luck.
   b. The concept of what good luck amounts to is vague.
   c. Good luck is always determined by fate.
   d. Good luck is only definable statistically.
   e. The occurrence of good luck can be explained scientifically.

   ANS: B PTS: 2

3. Scientific hypotheses must be framed narrowly enough to be:
   a. Indemonstrable.
   b. Provable.
   c. Determinable.
   d. Rationalizable.
   e. Disconfirmable.

   ANS: E PTS: 2

4. One of the reasons astrology is not considered a science is that:
   a. The rules for casting horoscopes are self contradictory.
   b. It is not taught in reputable colleges and universities.
   c. Calculating the interactions of planetary influences is too complicated.
   d. It shows no progress over many centuries of practice.
   e. It has been superseded by astronomy and cosmology.

   ANS: D PTS: 2

5. One consequence of Ockham's razor is that:
   a. The more complex an explanation is, the more complete it is.
   b. Naturalistic explanations are better than supernatural ones.
   c. Supernatural explanations are better than naturalistic ones.
   d. The best explanations are the ones containing numerous theoretical entities.
   e. Paranormal phenomena are not able to be explained.

   ANS: B PTS: 2

6. One of the reasons for the existence of superstitious beliefs is that:
   a. They help relieve anxiety.
   b. They are a reliable substitute for scientific conclusions.
   c. They explain various kinds of delusions and hallucinations.
   d. They are more satisfying to religious people than science.

e. They are useful in explaining the content of dreams.

ANS: A PTS: 2

7. The experiment performed by psychologists Singer and Benassi involving a conjurer who performed before a group of students tends to show that:
   a. A conjurer's tricks can be exposed by keen observers.
   b. People see what they have been conditioned to see.
   c. Psychokinesis is possible given the right conditions.
   d. Many people are disposed to magical ways of thinking.
   e. Clairvoyance is not a reliable way of solving crimes.

   ANS: D PTS: 2

8. An example of the placebo effect is:
   a. The apparent ability to recognize the picture on a Zener card without actually seeing it.
   b. Being able to walk on hot coals without getting burned.
   c. The apparent cure that results from taking sugar pills.
   d. The apparent ability to bend spoons and keys without touching them.
   e. Being able to levitate.

   ANS: C PTS: 2

9. An example of pareidolia is:
   a. Seeing the face of Jesus in the burn marks on a tortilla.
   b. Seeing what appears to be a UFO move against a dark sky.
   c. Hearing or seeing what seems to be a ghost just before falling asleep.
   d. Seeing the word "STOP" on a partly obscured road sign.
   e. Identifying personality features from the bumps on a person's head.

   ANS: A PTS: 2

10. An example of a Gestalt is:
    a. A temporary episode of color blindness.
    b. A retinal after-image caused by viewing a brightly lighted scene.
    c. A distorted perception caused by damage to the frontal lobe of the brain.
    d. The pattern created in one's mind by solving a puzzle.
    e. An optical illusion produced by overlapping geometrical figures.

    ANS: D PTS: 2

11. An example of the autokinetic effect is:
    a. The image of rapidly moving objects in the content of dreams.
    b. Seeing unknown entities move about in a dark closet.
    c. The perceived movement of a human body after death.
    d. The sensation of involuntary bodily movements while falling asleep.
    e. The apparent movement of a small stationary light in a dark room.

    ANS: E PTS: 2

12. Hypnagogic hallucinations may be the cause of:
    a. The appearance of faces in clouds.
    b. The alleged sightings of ghosts.
    c. Apparitions of the Virgin Mary in Medjugorje.
    d. Déjà vu experiences.
    e. Near death experiences.

ANS: B PTS: 2

13. An example of faked evidence is provided by the "feats" of:
    a. Bernard Leikind.
    b. James Randi.
    c. Uri Geller.
    d. Ray Hyman.
    e. Donald Singleton.

    ANS: C PTS: 2

14. The puzzle-solving character of science is illustrated by the effort of scientists to:
    a. Determine the atomic number of gold.
    b. Identify the composition of moon rocks.
    c. Measure the velocity of the earth's motion around the sun.
    d. Determine the salt content of sea water.
    e. Detect stellar parallax.

    ANS: E PTS: 2

15. The failure of palm readers to identify the causal connection between the lines on a person's hands and his or her life indicates that the theory of palm reading is:
    a. Internally incoherent.
    b. Inadequate.
    c. Unfruitful.
    d. Dysfunctional.
    e. Inapplicable.

    ANS: A PTS: 2

Chapter 14 Test C

MULTIPLE CHOICE

1. The claim that eating pickled parsley cured Mr. Smith's congestive heart failure is called:
   a. Supplementary evidence.
   b. Transitory evidence.
   c. Spurious evidence.
   d. Conditional evidence.
   e. Anecdotal evidence.

   ANS: E PTS: 2

2. Which of the following is a key feature of scientific experiments?
   a. Dependability.
   b. Replicability.
   c. Efficaciousness.
   d. Directionality.
   e. Stability.

   ANS: B PTS: 2

3. One of the features of superstitious hypotheses is:
   a. Vagueness.
   b. Falsifiability.
   c. Supernormality.
   d. Confirmability.
   e. Dubiosity.

   ANS: A PTS: 2

4. Ockham's razor is a principle that requires hypotheses to be:
   a. Complex.
   b. Functional.
   c. Simple.
   d. Empirical.
   e. Rational.

   ANS: C PTS: 2

5. To a large extent, the purpose of all superstitious hypotheses is to satisfy:
   a. Criminal inclinations.
   b. Innate curiosity.
   c. Financial needs.
   d. Emotional needs.
   e. Irrational dispositions.

   ANS: D PTS: 2

6. An apparent benefit derived from superstitious beliefs is:
   a. The ability to levitate.
   b. Psychokinesis.
   c. The ability to channel.
   d. Clairvoyance.

e. Relief of anxiety.

ANS: E PTS: 2

7. A cure that supposedly arises from a "medicine" or procedure having no therapeutic benefit is said to result from:
   a. The autokinetic effect.
   b. The medicinal effect.
   c. The placebo effect.
   d. The transmutational effect.
   e. The synthetic effect.

   ANS: C PTS: 2

8. The mental pattern that results from solving a puzzle or riddle is called:
   a. A gestalt.
   b. An epistemic stamp.
   c. A cognitive appliqué.
   d. An eidetic residue.
   e. A noetic profile.

   ANS: A PTS: 2

9. The effect by which a small stationary light surrounded by darkness will be seen to move is called the:
   a. Psychokinetic effect.
   b. Spuriokinetic effect.
   c. Psychotic effect.
   d. Kinesthetic effect.
   e. Autokinetic effect.

   ANS: E PTS: 2

10. Hallucinations that affect the vision of people in a large crowd are called:
    a. Popular delusions.
    b. Collective hallucinations.
    c. Galvanic hallucinations.
    d. Amplified delusions.
    e. Spiritual visions.

    ANS: B PTS: 2

11. Uri Geller's claims of having psychic power rested on:
    a. Superstitious evidence.
    b. Supernatural evidence.
    c. Transcendental evidence.
    d. Faked evidence.
    e. Epiphenomenal evidence.

    ANS: D PTS: 2

12. The ability of people to walk on glowing wood coals without getting burned is explained by the fact that:
    a. Wood coals contain a relatively low quantity of heat.
    b. Wood coals are extinguished by the moisture in people's feet.
    c. Neurolinguistic programming blocks the transmission of heat.
    d. The temperature of wood coals is very low.

e. Wood coals form a crust that blocks the transmission of heat.

ANS: A PTS: 2

13. According to Thomas Kuhn, one feature that distinguishes scientists from pseudo scientists is that scientists are:
    a. Workaholics.
    b. Equipped with laboratory facilities.
    c. Puzzle solvers.
    d. Theorizers.
    e. Practitioners.

    ANS: C PTS: 2

14. The claim that practitioners of transcendental meditation can levitate leads to:
    a. An idiosyncratic problem.
    b. An external consistency problem.
    c. A coherence problem.
    d. An adequacy problem.
    e. A functional problem.

    ANS: B PTS: 2

15. In regard to levitation, Maharishi International University's International Center for Scientific Research has done which of the following?
    a. Published papers in scientific journals.
    b. Compiled a list of meditators who can levitate.
    c. Conducted experiments.
    d. Nothing to speak of.
    e. Read papers before scientific bodies.

    ANS: D PTS: 2