

1. True or False Questions (24%) @John_Tutorial

- _____ 1. All unsound arguments are invalid arguments but not the vice versa.
- _____ 2. Stipulative definitions can have truth values of their own
- _____ 3. The subject term is undistributed in any particular categorical propositions
- _____ 4. A statement that immediately follows the indicator word "for the reason that" is the conclusion.
- _____ 5. If a word lacks an objective class to which it refers, it is said to be with an empty extension
- _____ 6. Conclusion of any inductive argument is never certain
- _____ 7. Simple group of statements can be taken as an argument
- _____ 8. Fallacies would never be common in deductive arguments
- _____ 9. Logic has to do more with cognitive meanings than with emotive meanings.
- _____ 10. Single proposition has its own validity
- _____ 11. The quality of particular categorical propositions is determined by their quantifiers
- _____ 12. Dictionary definitions are so useful in eliminating problems of vagueness arising from within an argument.
- _____ 13. Informal fallacies give due consideration to mistakes committed in logical structures of arguments
- _____ 14. Logic is a science that evaluates statements
- _____ 15. A deductive argument having true premise and false conclusion is non-existent
- _____ 16. Definition by sub-class is produced by naming the qualities that a term connotes

II. Multiple Choice Questions (15%)

- _____ 17. Which is common to all universal categorical propositions
 - A) A claim about every member of predicate term is asserted
 - B) None of the subject terms is distributed
 - C) Aristotle and Boole have positive claim about existence
 - D) Quality is determined by copula
 - E) None of these
- _____ 18. Having the idea of Aristotelian Interpretation in mind, in which of the following pairs of propositions one may not expect a sort of opposition?
 - A) A and O
 - B) O and I
 - C) E and A
 - D) I and A
 - E) E and I
- _____ 19. If you are sure that a deductive argument is not valid, it must not be _____
 - A) Invalid
 - B) unsound
 - C) sound
 - D) all but 'C'
 - E) none of these

34. Given that G, H, I True and J, K, L false, what is the truth value of the following proposition? $\sim [(G \supset H) \cdot (I \vee J)] \equiv [(K \supset \sim G) \vee (\sim J \cdot L)]$
- ☒ A. True
B. False
C. Half true and half false
D. Valid
E. Invalid
35. Which one of the following is TRUE about the following arrangement of proposition?
 $\sim M \supset N / N \supset M / M \supset \sim N // M \cdot \sim N$
- ☒ A. It is valid
B. It is Invalid
C. It is True
D. It is False
E. None of the above

Instruction II. Assign the name of the proper fallacy given below to the arguments that are written from No. 1-10.

No fallacy
Suppressed evidence
Appeal to piety
Non causa pro causa
Appeal to ignorance
Division

Argument against the person-abusive
Missing the point
Equivocation
Composition
Appeal to people-bandwagon
Straw man

1. President Obama is not an African-American. His mother is an Irish, besides he has never lived in Africa. no fallacy
2. My mother promised me to buy a motor cycle, if I stand first in my class. Thus my mother has to buy me a motor cycle so that I will stand first in my class. Appeal to piety
3. Netanyahu argues to crush Iran like Iraq and Afghanistan. He is just a heartless monster without any respect for the value of human life. We, therefore, should not attend his poisonous rhetoric. Appeal to Ignorance
4. Keys help to open unlocked doors. This key is an answer key. Thus it helps to open the door of answers. _____
5. He is innocent; because there is no proof that he is guilty of a crime. _____
6. Our heart is made up of microscopic cells; thus our heart is microscopic. _____

17. An arrangement of lines that illustrated logically necessary relations among the four types of propositions is known as _____.

- ☒ A. Boolean square of oppositions
- B. Aristotelians Square of oppositions
- C. Traditional Square of oppositions
- D. Modern Square of oppositions
- E. All of the above

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18. One of the following arguments is **valid** from Aristotelian standpoint:

- A. All S are P. Therefore, Some S are P.
- B. It is false that all S are P. Therefore, No S are P.
- C. Some S are P. Therefore, all S are P.
- ☒ D. It is false that some S are not P. Therefore, No S are P.
- E. None of the above.

19. One of the following arguments is **invalid** from the Booleans stand point:

- ☒ A. It is false that some S are P. Therefore, it is false that no S are P.
- B. It is false that some S are not P. Therefore, it is not the case that No S are P.
- C. All S are P. Therefore, Some S are not P.
- D. All S are P. Therefore, Some S are P.
- E. All of the above

20. One of the following Venn diagrams accurately represent an A proposition where the subject term represents an entity which exists:

- A.
- B.
- C.
- D.
- E.

21. Which one of the following arguments is Valid?

- A. All S are P. Therefore, All P are S.
- B. Some P are not S. Therefore, Some S are not P.
- C. Some S are not P. Therefore, some S are not non-P.
- D. Some S are P. Therefore, some non-P are non-S.
- ☒ E. A and B

22. One of the following arguments commits Existential fallacy from the Boolean point of view:

- A. All S are P. Therefore, Some S are P.
- B. No S are P. Therefore, it is false that all S are P.
- C. It is false that some S are not P. Therefore, Some S are P.
- D. All of the above
- ☒ E. None of the above

28. One of the following arrangements of symbols does NOT qualify as WFFs (well formed formula)

- A. $(F \cdot H) \vee (\sim K \cdot \sim L)$
- B. $[K \vee (S \cdot \sim T)] \supset [\sim F \vee (M \cdot O)]$
- C. $K \vee S \cdot \sim T \supset [\sim F \vee (M \cdot O)]$
- D. $[K \vee (F \supset I)] \equiv [\sim L \cdot (G \vee H)]$
- E. None of the above

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29. Which one of the following is NOT a compound statement?

- A. $\sim A$
- B. $(B \supset C) \vee D$
- C. $E \supset (F \cdot \sim G)$
- D. $K \equiv L$
- E. None of the above

30. $\sim [(K \vee L) \cdot (\sim O \supset P)] \equiv [(\sim E \cdot P) \supset (R \cdot B)]$ Which one of the following is the main operator?

- A. Negation $\sim$
- B. Conjunction $\cdot$
- C. Disjunction $\vee$
- D. Implication $\supset$
- E. Bi-implication $\equiv$

31. Which one of the following five steps should come first in computing the truth value of a longer proposition?

- A. Operators joining letters or negated letters.
- B. Operators joining parenthesis or negated parenthesis with letters, parenthesis or negated parenthesis
- C. Tildes immediately preceding individual letters.
- D. Tildes immediately preceding parenthesis.
- E. Tildes immediately preceding brackets.

32. Which one of the following argument form is fallacious (invalid)?

- A. (MP) $p \supset q / p // q$
- B. (MT) $p \supset q / \sim q // \sim p$
- C. (CD) $(p \supset q) \cdot (r \supset s) / \sim q \vee \sim s // \sim p \vee \sim r$
- D. (AC) $p \supset q / q // p$
- E. (DS) $p \vee q / \sim p // q$

33. The relation between the truth values of the following two statements is _____
(1) $(A \supset B) \vee C$ (2) $(D \cdot \sim E) \supset F$

- A. Tautologous
- B. Logically equivalent
- C. Contradictory
- D. Self-contradictory
- E. None of the above

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7. I love President Mugabe; because every African loves him. _____
8. Our hospitals are short of medicine and proper medical personnel; thus the proper solution is to close them all _____
9. My grandmother was so intelligent; because no one proved still that she was dull. _____
10. I am a widow with three kids, and also I have to support my sick old father. Thus I deserve this job more than anybody else. non causa pro causa

Instruction III: Write True if the statement is correct and False if it is incorrect on the answer sheet provided. (1 point for each)

- T 1. Subject term is undistributed in any particular categorical propositions. T
- T 2. The predicate term is distributed in all negative propositions. T
- T 3. If an O proposition is given as false, we can logically determine the truth values of its corresponding I and E propositions from Aristotelian stand point. T
- F 4. Contraposition is a logical operation which involves switching the subject with the predicate term and replacing the predicate term with its complement. F
- T 5. Any categorical syllogism containing an ambiguous word is not given in standard T form.

Instruction IV: Workout

1. Using "intellectuals" as the predicate term of the conclusion, "genuine individuals" as the subject of the conclusion and "corrupted officials" as the middle term, construct the argument and determine its validity for OEI-3. If the argument is invalid, identify at least one fallacy.

some c are not I.
no c are G
Some G are I

Exclusive premise.

Invalid



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12. In one of the following arguments the middle term does NOT assert something about every member of the class it denotes.

- A. EAE-2
- B. AII-2
- C. AEE-4
- D. AAI-3
- E. EAO-3

13. Given the truth values for A, B and C are true and D, E and F are false, which one of the following compound propositions has false truth value?

- A. $(B \cdot C) \supset (E \supset A)$
- B. $\sim (C \vee \sim A) \supset \sim B$
- C. $\sim [(D \vee F) \cdot (B \vee \sim A)] \supset \sim (F \supset \sim C)$
- D. All
- E. None

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14. One of the following is NOT true about the argument: "Some logic instructors are PhD students; All logic instructors are MA holders; therefore, Some MA holders are PhD students."?

- A. The middle term is logic instructors ✓
- B. The major term is PhD students ✓
- C. The minor term is MA holders ✓
- D. The major premise is PhD students
- E. None of the above

15. One of the following propositions is given in standard form of categorical propositions:

- A. Ice melts at hundred degrees centigrade.
- B. All birds are not mammals.
- C. Some children are human beings who shout in the classroom.
- D. No employees are not corrupted.
- E. None of the above

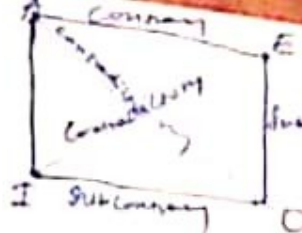
16. One of the following propositions can serve as a component part of a syllogism:

- A. If all citizens clean their environment, then our earth will be clean.
- B. Either 'Wolqait' sugar Plant will be built or Ethiopia will not have sufficient sugar product.
- C. All students are learners.
- D. All of the above
- E. None of the above

Major term by defn: is the predicate of the conclusion.

Minor term: is the subject of the conclusion.

middle term: it provides the middle ground between the two premises doesn't occur in conclusion.



Contrary - at least one false must be true
 Subcontrary - at least one true must be true
 Subalternation - one true one false allowed
 Contradiction - one true one false not allowed

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- C 23. If the proposition "Some non-P are not non-S" is given False, what is the truth value for "Some S are not P"?
- A. It must be False.
 - B. It must be true.
 - C C. It may be either true or false.
 - D. It is undetermined.
 - E. C and D

- C 24. One of the following is **TRUE** about the terms in a standard form of categorical syllogism:
- A. The major premise necessarily contains the predicate term of the conclusion.
 - B. The minor premise necessarily contains the predicate term of the conclusion.
 - C C. The middle term exists both in the minor premise and the conclusion.
 - D. All of the above
 - E. None of the above

Answer the following three questions based on the following categorical syllogism:

Some M are P.

All M are S.

Some S are not P.

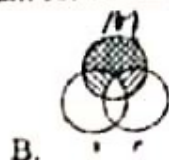
- D 25. One of the following is **NOT** true about the argument given above:

- A. The mood is IAO
- B. It is in the third figure
- C C. Its syllogistic form is IAO-3
- D D. It is a valid argument
- E. It is an invalid argument.

- E 26. One of the following is **TRUE** about the evaluation of the above argument:

- A. It commits Illicit Major Fallacy
- B. It commits Illicit Minor Fallacy
- C. It commits Drawing Negative conclusion from Affirmative premises
- D. It commits Exclusive Fallacy
- E E. A and C

- A 27. The Venn diagram for the above syllogism looks like:



E. None

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