BOOKELT CODE 001

SUBJECT CODE 05
Number of Items: 60
Time Allowed 1:00hr

I. Choose the correct answer.

1. In 5 experiment with the same objective, the values obtained are very near to each other. These values can be called _____
   A. Precise B. accurate C. average D. invalid
2. A virus is viewed under a microscope. Its diameter is 0.0000002 meter. How would this length be expressed using prefixes?
   A. 2 µm B. 20 µm C. 0.2 µm D. 20nm
3. Which one of the fundamental quantities matches correctly with its basic unit?
   A. Time –Hour C. Temperature-centigrade
   B. Length kilometer D. amount of substance –mole
4. Which one of the following is **not** the indigenous unit of mass measurement?
   A. Weqet B. pace C. feresula D. Quntal
5. Scientific method involves
   A. Formation of hypothesis
   B. Testing of hypothesis
   C. Analysis of data and drawing conclusion
   D. All
6. Which of the following is true about historical development of atomic theory?
   A. Aristotle believed that matter is discrete
   B. Demoritus proposed that atoms are divisible
   C. Demiritus believed the existence of atom
   D. Aristotle said “there is a limit to which matter is broken”
7. Which one of the following is wrong?
   A. Electrons are 1837 times heavier than proton
   B. All elements have the same type of protons
   C. Atom is divisible into three components
   D. Electrons are found outside the nucleus
8. Which of the following set of numbers **cannot** be the number of electrons, protons and neutrons of an atom respectively?
   A. 6,6,8 B. 11,11,12 C. 12,12,12 D. 10,9,10
9. Which of the following is true about subatomic particles.
   A. Electrons and neutrons have equal number but opposite charge
   B. Neutrons have slightly higher mass than protons
   C. Electrons and protons have equal mass
   D. Protons and neutrons have equal number but opposite charge
10. The number of neutrons present in the nucleus of hydrogen atom (^1_1H)is
    A. 1 B. 2 C. 0 D. 4
11. Which of the following molecule is different from the other
    A. Helium B. water C. Hydrogen D. ozone
12. Which of the following sets of compounds represents alkyne group of hydrocarbon?
    A. $C_3H_6, C_5H_{10}, C_7H_{14}$ C. $C_7H_{12}, C_9H_{16}, C_{11}H_{20}$
    B. $C_6H_6, C_8H_{10}, C_4H_{10}$ D. C_2H_2, C_3H_6, C_4H_8

13. The first organic compound synthesized in a laboratory was ____and the chemist who prepared it called_____
    A. Water ,Joseph priestly
    B. Urea, J.J Thomson
    C. methane, Democritus
    D. Urea. Friedrich wohler
14. Which of the following is correctly matched with its name?
    A. C_2H_2-Ethyne
    B. CH_4-Methyne
    C. C_5H_{12}-Propane
    D. C_8H_{14}-octene
15. Which of the following hydrocarbon is mixed with butane to prepare bottled gas (butagas)?
    A. C_5H_{12} B. C_3H_6 C. C_5H_{10} D. C_3H_8
16. What is the gas produced when acids react with carbonates?
    A. Water vapor B. H_2 C. CO_2 D. O_2
17. A lab technician in a school chemistry laboratory performed an experiment to prepare a certain substance "x" using the following procedure
    1. A small amount of substance y is burned
    2. Add 5ml of water and the substance "x" is formed
    3. He put red litmus paper and changed to blue

    from this observation. Substance "x" can be
    A. an acid B. a salt C. an alkali D. water
18. Which of the following is correctly matched with its group of compounds?
    A. H_2CO_3-acid B. $Mg(OH)_2$-salt C. $CaCO_3$-Base D. KNO_3-Oxide
19. Which of the following bones are parts of axial skeleton?
    A. Legs and arms
    B. Skull and Vertebrae
    C. scapula and clavicle
    D. carpal and tarsals
20. Which of the following statement is correct?
    A. Thoracic cage consists scapula and clavicle
    B. Axial skeleton divides the body into equal upper and lower parts
    C. Tendon gives structure for boneless organs
    D. Hip bones (pelvic girdle) are component of appendicular skeleton.
21. Bones that are box like in appearance are called _____.
    A. Short bones B. long bones C. flat bones D. Axial bone
22. The general path followed by air as it enters the human body is
    A. Nose $\longrightarrow$ trachea $\longrightarrow$ bronchioles $\longrightarrow$ bronchus $\longrightarrow$ alveoli
    B. Nose $\longrightarrow$ bronchus $\longrightarrow$ trachea $\longrightarrow$ bronchioles $\longrightarrow$ alveoli
    C. Nose $\longrightarrow$ trachea $\longrightarrow$ bronchus $\longrightarrow$ bronchioles $\longrightarrow$ alveoli
    D. Nose $\longrightarrow$ bronchus $\longrightarrow$ bronchioles $\longrightarrow$ trachea $\longrightarrow$ alveoli
23. What are the main parts of circulatory system?
    A. heart, liver and lung
    B. heart. blood vessels and blood
    C. heart, arteries and veins
    D. arteries, veins and capillaries
24. Which of the following change occurs in boys at puberty
    A. widening of the pelvic girdle
    B. growth of breasts
    C. Enlargement of larynx
    D. Ovulation starts
25. The lower fatty layer of human skin which helps to insulate the body against heat loss is
    A. Hypodermis B. Epidermis C. dermis D. Receptor
26. Which of the following structures of the heart is correctly matched with its function?

A. Left atrium $\longrightarrow$ receives oxygenated blood from the lung
B. Right atrium $\longrightarrow$ pumps blood out of the heart
C. Left ventricle $\longrightarrow$ pumps blood to the lungs
D. Right ventricle $\longrightarrow$ receives deoxygenated blood from the body

27. Which layer of skin contain blood vessels, sensory receptors and others.
A. Upper layer B. Middle layer C. Lower layer D. Epidermis
28. The part of the Nain that is responsible for growth of the fingernail.
A. Lunula B. Nail bed C. cuticle D. Matrix
29. Which of the following gland is used to release oil, used to lubricate and protect the hair shaft?
A. Sebaceous gland C. Ceruminous gland
B. Sudoriferous D. Mammary gland
30. Which skin disease is caused by staphylococcus aureus bacteria make their way into the hair follicles?
A. Wart B. chickenpox C. carbuncle D. Blister
31. When you lift your hand, what types of muscles are mainly involved?
A. Cardiac muscle B. smooth muscle C. skeletal muscle D. heart muscle
32. Which property of muscle is reduced during old age, called spasticity?
A. Extensibility B. Excitability C. Elasticity D. contractility
33. Which of the following statement in INCORRECT?
A. Bone is where most blood cells are made
B. Short bones are hard, compact and filled with bone marrow
C. Flat bones have no cavity or hollow
D. Hyoid is one component of axial skeleton
34. Which of the following joint is matched with a correct example?
A. Hinge joint $\longrightarrow$ shoulder joint
B. Ball and socket joint $\longrightarrow$ Elbow
C. Immovable joint $\longrightarrow$ sutures (skull)
D. Ball and socket joint $\longrightarrow$ fingers
35. In adult human, the full set of teeth contains 8 incisors, 4 canines, 8 premolars and 12 molars. The correct dental formal of an adult human is:
A. $I:\frac{8}{8}\ C:\frac{4}{4}\ P:\frac{8}{8}\ M:\frac{12}{12}$ C. $I:\frac{4}{4}\ C:\frac{2}{2}\ P:\frac{4}{4}\ M:\frac{6}{6}$
B. $I:\frac{1}{1}\ C:\frac{1}{1}\ P:\frac{1}{1}\ M:\frac{1}{1}$ D. $I:\frac{2}{2}\ C:\frac{1}{1}\ P:\frac{2}{2}\ M:\frac{3}{3}$
36. _____Provides flexible and elasticity for joints by reducing friction between bones.
A. Tendon B. Cartilage C. ligament D. Bone
37. Bile is used to break up fats into small, easily digested droplets. This process is called _____
A. Neutralization B. Emulsification C. Digestion D. Absorption
38. Which of the following is the main function of the large intestine?
A. Preparation of bile C. Absorption of water
B. Secretion of amylase enzyme D. Secretion of HCl
39. Which of the following is true about the blood vessels?
A. Arteries carry blood towards the heart

B. Veins carry blood away from the heart
C. Pulmonary veins carry deoxygenated blood
D. Pulmonary arteries carry deoxygenated blood

40. Which chamber of the heart has the thickest walls and pumps blood to all body parts?
A. Right atrium B. Left atrium C. left ventricle D. Right ventricle

41. The finger like projections in small intestine used for absorption of digested food into blood vessels.
A. Alveoli B. Villi C. Duodenum D. gall bladder

42. Which of the following **best** describes cellular respiration
A. The release of energy from food.
B. The exchange of gases
C. The breathing in of oxygen and out carbon dioxide
D. The transportation of blood to the heart

43. The two tubes that carry air from the windpipe into the lungs are called:
A. Trachea B. Bronchi C. Alveoli D. Pharynx

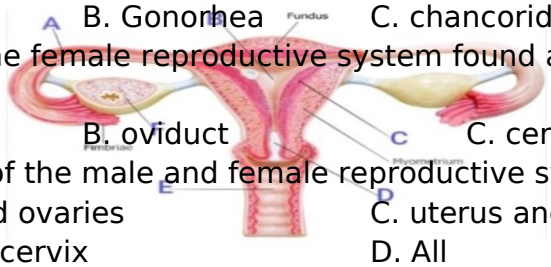
44. Which blood cell is characterized by non-nucleated, disc shaped and used to transport oxygen?
A. Erythrocytes B. Leucocytes C. Thrombocytes D. platelets

45. Which disease is caused when the blood supply to part of your brain is interrupted?
A. Hypertension B. Heart attack C. Strokes D. Heart failure

46. The correct order for the passage of sperm from the place of its production is
A. epididymis → Testes → vas deferens → urethra
B. Testes → vas deferens → epididymis → urethra
C. Testes → epididymis → vas deferens → urethra
D. Vas deferens → urethra → epididymis → Testes

47. Which of the following STD is caused by Treponena pallidum?
A. Syphilis B. Gonorrhea C. chancorid D. HIV/AIDS

48. The part of the female reproductive system found at lower end of the uterus is _____
A. Vagina B. oviduct C. cervix D. ovary

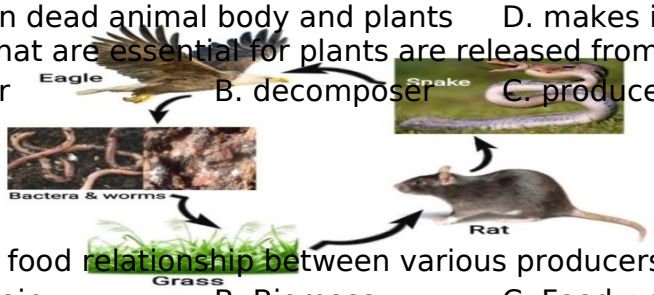


49. Which parts of the male and female reproductive system are equivalent?
A. Testes and ovaries C. uterus and urethra
B. Penis and cervix D. All

50. In the above figure
The sperm unites with the egg in the structure labeled.
A. E B. D C. B D. A

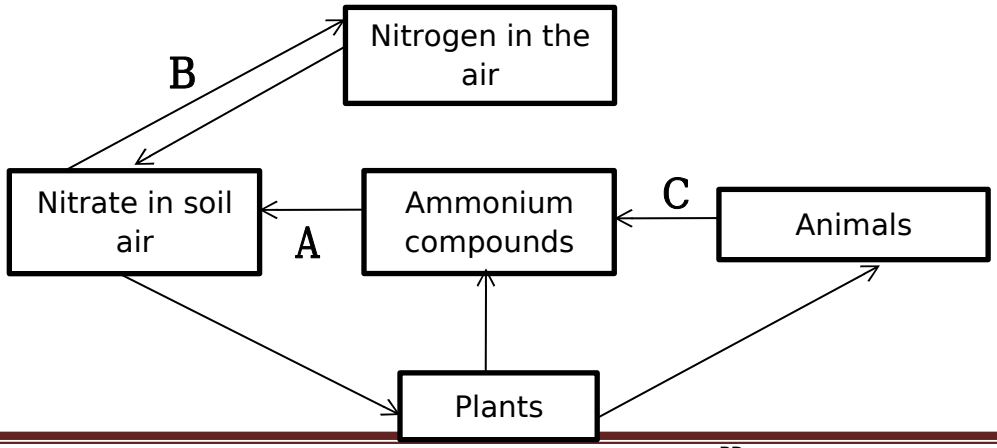
51. In ecosystems, all of the following are passed from one trophic level to the other in a cyclic manner except
A. Energy B. Nitrogen C. water D. Carbon

52. Which of the following is correct about autotroph? It
    A. Feeds on plants only
    B. Feeds on dead animal body and plants
    C. Feeds on animals only
    D. makes its own food
53. Nutrients that are essential for plants are released from the dead bodies by
    A. Predator B. decomposer C. producer D. herbivore



54. The coplex food relationship between various producers and consumers is called _____.
    A. Food chain B. Biomass C. Food web D. Energy

55. In the above food relationship;which one of the following is **not** true?
    A. .Much energy is stored in grasses than consumers.
    B. Sunlight is the source of energy for all organisms
    C. the eagle is found in third trophic level
    D. rats are primary consumer
56. Which of the following processes occur during carbon cycle?
    A. CO_2 is removed from the air during burning of fossil fuels.
    B. CO_2 is released during the decomposition of dead organisms
    C. CO_2 is removed from the air during respiration
    D. CO_2 is released to the air during photosynthesis
57. In commensalism, the relationship of species A and species B is
    A. A is benefited and B is not affected
    B. A and B both are benefited
    C. A is benefited and B is harmed
    D. Both A and B are harmed
58. Which one is true?
    A. Symbiosis is when neither population affects each other
    B. Parasitism is when the interaction is harmful to both the populations.
    C. Proto cooperation is when one organism is benefited without harming or benefitting the other
    D. Competition is when both population are harmed
59. Based on the following nitrogen cycle:



What are the processes “A”, “B” and “C” represent respectively?

A. Nitrogen fixation ,Ammonification, Nitrification
B. Nitrification ,nitrogen fixation ,Ammonification
C. Nitrification, denitrification, ammonification
D. Ammonification, nitrogen fixation, nitrification

60. Which one of the following is the fusion of the male and female gamete to form a zygote?

A. Menstruation
B. Pollination
C. Ejaculation
D. Fertilization