LIDETA CATHOLIC CATHEDRAL SCHOOL BIOLOGY REVIEW QUESTIONS FOR DISCUSSION

♠♠♣♣FOR THE FOLLOWING REVIEW QUESTIONS CHOOSE THE CORRECT ANSWER OR ANSWERS AMONG THE GIVEN ALTERNATIVES.[IF THERE IS NO CORRECT ANSWER AMONG THE ALTERNATIVES,WRITE THE CORRECT ONE ON THE EMPTY SPACE IN THE SIDE OF THE QUESTION.]♣♣♠♠

Try to indicate from your grade 11 and 12 text books those pages which contain the answers.

1. In the process of transcription, _____.

   ◯ A. DNA is replicated
   ◯ B. mRNA is synthesized
   ◯ C. proteins are synthesized
   ◯ D. mRNA attaches to ribosome

2. In peas, a pure tall plant (TT) is crossed with a pure short plant (tt). The ratio of pure tall plants to pure short plants in F2 generation will be

   ◯ A. 1:3
   ◯ B. 3:1
   ◯ C. 1:1
   ◯ D. 2:1

3. The codon is found on _____, and the anticodon is found on _____.

   ◯ A. tRNA, mRNA
   ◯ B. rRNA, mRNA
   ◯ C. mRNA, tRNA
   ◯ D. mRNA, rRNA

4. What characterizes a prokaryotic cell?

   ◯ A. the presence of mitochondria
   ◯ B. the presence of chloroplasts
   ◯ C. the membrane bound nucleus
   ◯ D. the unicellular level of organization

5. Which blood type would NOT be possible for children of a type AB mother and a type A father?

   ◯ A. A B
   ◯ B. B
   ◯ C. O
   ◯ D. AB

6. The only acellular micro-organisms are

   ◯ A. fungi
   ◯ B. bacteria
   ◯ C. viruses
   ◯ D. protozoa

7. In the process of condensation reaction making a double sugar, which one of the follwing happpens?

   ◯ A. water is used up
   ◯ B. carbon dioxide is released
   ◯ C. two oxygen molecules is released
   ◯ D. water is released as by product

8. Which one of the following is TRUE in relation to transmission electron microscope?

   ◯ A. show the three-dimensional surface of cell
   ◯ B. use beams of light to produce magnified images
   ◯ C. shows the insides details of a cell structure
   ◯ D. it has less magnification and resolution power

9. Which of the following statements are NOT true about nitrogen-fixing bacteria? They

   ◯ A. converts nitrogen gas into ammonium ions
   ◯ B. are found in nodules on the roots of legumes
   ◯ C. break down nitrate ions into ammonium ions
   ◯ D. plays a vital role in the nitrogen cycle in nature

10. Chromosomes are made from

    ◯ A. DNA and a set of globular proteins
    ◯ B. RNA and a set of globular proteins
    ◯ C. DNA and a set of fibrous proteins
    ◯ D. RNA and a set of fibrous proteins

11. The asymptomatic period following the intial acute stage caused by HIV infection is characterized by

    ◯ A. the body is susceptible to opportunistic infection
    ◯ B. the number of HIV in the blood is high
    ◯ C. high level of HIV antibodies
    ◯ D. high level of T-lymphocytes

12. What makes phospholipids molecules arrange themselves into bilayer in a water molecule?

    ◯ A. the double bond of fatty acid
    ◯ B. the length of fatty acid chain
    ◯ C. the high solubility of water
    ◯ D. the amphipathic nature of lipids

13. Which one of the following is used to find out the way in which life begin on earth from simple life form into more complex one?

    ◯ A. Paleontology
    ◯ B. Oncology
    ◯ C. Physiology
    ◯ D. Entomology

14. The four daughter cells produced in meiosis will have a

    ◯ A. n number of chromosomes and will differ genetically from each other
    ◯ B. 2n number of chromosomes and will differ genetically from each other
    ◯ C. 2n number of chromosomes and will be genetically identical to each other
    ◯ D. n number of chromosomes and will be genetically identical to each other

15. When single-stranded DNA from a human is mixed with single-stranded DNA from a chimpanzee, we find that about 98% of the DNA is homologous. This can be taken as evidence that

    ◯ A. humans evolved from chimpanzees
    ◯ B. chimpanzees evolved from humans
    ◯ C. humans and chimpanzees are closely related
    ◯ D. humans and chimpanzees originated in similar environments

16. Which of the following is a rarely clinical method to test for HIV-infection?

    ◯ A. testing for human anti-HIV antibodies
    ◯ B. microscopic examination of the viruse
    ◯ C. measuring the amount of hemoglobin
    ◯ D. counting the number of white blood cells

17. In scientific method, what is the importance of a background of research for a given problem?

    ◯ A. to make a prediction
    ◯ B. to prepare report
    ◯ C. to formulate hypothesis
    ◯ D. to make a conclusion

18. Which of the following group of monosaccharide s are all ketose?

    ◯ A. dihydroxy acetone,fructose and ribose
    ◯ B. glyceraldehyde,ribose and glucose
    ◯ C. dihydroxy acetone, ribulose and fructose
    ◯ D. glyceraldehye, ribulose and glucose

19. The presence of several different biomes within the Ethiopia results in

    ◯ A. the high species richness of plants and mammals
    ◯ B. the low species richness of plants and mammals
    ◯ C. the high species richness of plants but low mammals
    ◯ D. the high species richness of mammals but low plants

20. Which of following is NOT the observations on which Darwin based his theory of evolution?

- ◯ A. The offspring show a great deal of genetic variation
- ◯ B. Characteristics are inheritable from parent to offspring
- ◯ C. The inheritance the acquired traits from parent to offspring
- ◯ D. Competition of offspring for resources (survival of the fittest)

21. Cytosine makes up 42% of the nucleotides in a sample of DNA from an organism. Approximately what percentage of the nucleotides in this sample will be thymine?

- ◯ A. 58%
- ◯ B. 42%
- ◯ C. 16%
- ◯ D. 8%

22. A larger brain NOT allows humans to

- ◯ A. create life on the planet Earth
- ◯ B. plan in advance to avoid attack
- ◯ C. develop and use tools and weapons
- ◯ D. run faster in a more upright posture

23. Which of the following tools is used by biologist to study the internal anatomy of experimental animals?

- ◯ A. dissecting kit
- ◯ B. petri dish
- ◯ C. hand lens
- ◯ D. microscope

24. Which of the following determines the sex of a child?

- ◯ A. The length of the mother's pregnancy period
- ◯ B. The presence of a Y chromosome in a sperm
- ◯ C. The presence of a X chromosome in an ovum
- ◯ D. The length of time between ovulation and copulation

25. Suppose an experimenter conducts a study on the effect of oxygen on seed germination,if he supplied sufficient oxygen to group "A" and no oxygen to group "B". what does group "B" represents?

- ◯ A. test group
- ◯ B. variable group
- ◯ C. control group
- ◯ D. experimental group

26. Function of the Acetobacter bacteria is

- ◯ A. treatment of sewage
- ◯ B. production vinegar
- ◯ C. fermentation of alcohol
- ◯ D. production of antibiotic

27. Which one of the following linkage,links glucose and fructose molecule in making sucrose?

- ◯ A. α-1,4 glycosidic bond
- ◯ B. α-1,2 glycosidic bond
- ◯ C. β-1,6 glycosidic bond
- ◯ D. β-1,4 glycosidic bond

28. Biodiversity is

- ◯ A. an area with specific biotic and abiotic conditions
- ◯ B. a measures taken by people to restore an ecosystem
- ◯ C. replacement of one ecosystem by another ecosystem
- ◯ D. a measure of the overall variability of life on the Earth

29. What is the classification criterion of the human races into Negroid, Caucasoid and Mongoloid?

- ◯ A. Large brain
- ◯ B. Exact nature
- ◯ C. True bipedalism
- ◯ D. Genetic analysis

30. What are the two most abundant elements in the body of an organism?

- ◯ A. hydrogen and carbon
- ◯ B. carbon and oxygen
- ◯ C. hydrogen and oxygen
- ◯ D. hydrogen and nitrogen

31. A woman with unknown blood type and a man also with unknown blood type could potentially have four children with all blood groups in different years. What are the possible blood groups of the parents?

- ◯ A. A and B blood group
- ◯ B. A and O blood group
- ◯ C. B and O blood group
- ◯ D. AB and O blood group

32. What is the independent variable,if we want to measure the effect of tutor on students' academic success?

- ◯ A. academic success
- ◯ B. class size
- ◯ C. tutor
- ◯ D. number of students

33. A person who has type O blood has

- ◯ A. A antigens on the cell surface
- ◯ B. B antigens on the cell surface
- ◯ C. no surface antigens on the cells
- ◯ D. both A and B antigens on the cell surface

34. Which property of water allows organisms to resist change in temperature in cells and aquatic habitat?

- ◯ A. High surface tension
- ◯ B. high specific heat
- ◯ C. low density when frozen
- ◯ D. solvent property

35. In which of the following the population growth curve, all the organisms are adapted and reproduce rapidly due to the abundant resources?

- ◯ A. Lag phase
- ◯ B. Log phase
- ◯ C. Decline phase
- ◯ D. Stationary phase

36. The genetic code is NOT a

- ◯ A. triplet code
- ◯ B. universal code
- ◯ C. degenerate code
- ◯ D. overlapping code

37. The traits determined by the genes found only on the X chromosome or on the Y chromosome are said to be

- ◯ A. Sex-linked traits
- ◯ B. SRY gene traits
- ◯ C. Sex-limited traits
- ◯ D. Sex-influenced traits

38. Which of the following are the most significant factors in determining biome type?

- ◯ A. Soil type and soil depth
- ◯ B. Temperature and rainfall
- ◯ C. Temperature and climates
- ◯ D. Climates and grazing animals

39. A straight line across an expanse of ground along with ecological measurements are taken continuously at a regular intervals is called

- ◯ A. quadrant
- ◯ B. pitfall traps
- ◯ C. flow meter
- ◯ D. transect

40. One of the following decrease the reliabilityof an experiment?

- ◯ A. repeat experiment many times
- ◯ B. working as quickly as possible
- ◯ C. minimizing personal judgment
- ◯ D. use of the most appropriate apparatus