

UMMUL-QURA HIGH SCHOOL

Arowona Bus-Stop, Akanran Road, Oyo State, Ibadan.

First-Term Examination, 2020/2021 Session.

SUBJECT: Biology.

CLASS: SSS 3

Instructions: Answer **all** questions in SECTION **A** and **three** from SECTION **B**.

SECTION **A:** **OBJECTIVES**

Time: 1hour.

1. The rate of decomposition of organisms is faster in the tropical rainforest than in another biomass because ----.
 - A. of the relatively constant daylight
 - B. there are more plants per square feet
 - C. of abundance of water
 - D. of constant cool temperatures
2. Vaccination results in ---.
 - A. aiding red blood cells to carry more oxygen
 - B. production of antibodies which destroy toxins of germs.
 - C. arrest excessive bleeding
 - D. production of white blood cells which engulf and digest bacteria
3. The branches of biology that deals with the principles of classification of organism is known as;
 - A. biological index.
 - B. nomenclature.
 - C. taxonomy.
 - D. ecology.
4. Which of the following structures is a tissue?
 - A. Vessel element.
 - B. Blood.
 - C. Sieve tube element.
 - D. Erythrocyte.
5. Which of the following animals exhibits territoriality?
 - A. Rabbit.
 - B. Earthworm.
 - C. Lizard.
 - D. Toad.
6. The importance of courtship in animals include the following **except**;
 - A. ensuring that the females choose the right male species.
 - B. arousing both male and female partner.
 - C. protection of territory.

- D. to coincide with the ovulation period and ensure fertilization.
7. Which of the following organisms is **not** classified as an animal?
- A. Amoeba.
 - B. Paramecium.
 - C. Euglena.
 - D. Obelia.
8. An organism that operates at the cellular level of organism, carries out its physiological activities by using its ----.
- A. cell membrane
 - B. organelles
 - C. small size
 - D. cytoplasm
9. The organelle which eliminates water from the body of a protozoan is it's ----.
- A. contractile vacuole
 - B. nucleus
 - C. cell wall
 - D. cell membrane
10. The axial skeleton is composed of the --- and ---.
- A. skull, vertebral column
 - B. limbs, girdles
 - C. atlas, axis
 - D. radius, ulna
11. The inorganic components of bone consist of ----.
- A. magnesium, sodium and calcium
 - B. sodium, phosphorus and calcium
 - C. magnesium, phosphorus and calcium
 - D. potassium, magnesium and calcium
12. In testing for starch in leaf, the leaf is first boiled in water for about a minute so that the ----.
- A. cell walls are hardened.
 - B. cell is killed
 - C. chlorophyll is dissolved out
 - D. iodine will penetrate
13. In a particular habitat the home or an organism is referred to as its
- A. level
 - B. biomass
 - C. niche
 - D. species

14. A group of closely related organisms capable of interacting to produce fertile offspring are known as members of ----.
- A. kingdom
 - B. class
 - C. family
 - D. species
15. The longest bone in the body is the;
- A. humerus
 - B. femur
 - C. scapula
 - D. tibia
16. Which of the following structures is **not** a skeletal material?
- A. Chitin
 - B. Cartilage
 - C. Bone
 - D. Muscle
17. Which of the following organisms is an endoparasite?
- A. Mice
 - B. Mosquito
 - C. Ascaris
 - D. Dodder
18. Food chains are relatively short because;
- A. of energy recycling in the ecosystem.
 - B. energy gain at each tropic level is high.
 - C. of energy lost at each tropic Level.
 - D. energy flow in an ecosystem is unidirectional.
19. In the binomial system of naming organisms, the second name is called the ---- name.
- A. scientific
 - B. common
 - C. generic
 - D. specific
20. The living material of the cell consists of ---- and ----.
- A. nucleus, cytoplasm
 - B. cytoplasm, vacuole
 - C. cytoplasm, cell membrane
 - D. nucleus, cell membrane
21. Plant hormones include the following **except**;
- A. insulin.

- B. auxin.
 - C. cytokinin.
 - D. gibberellin.
22. Which of the following sensations may **not** be detected by the skin?
- A. Touch.
 - B. Pressure.
 - C. Stress.
 - D. Pain.
23. Filaments of spirogyra placed in a beaker of tap water in a dark cupboard died because --
- A. the filaments could not photosynthesize
 - B. conjugation could not take place
 - C. the temperature was too high
 - D. the plant was overflooded
24. A community is best defined
- A. as living things in a habitat interacting with the non-living part of the environment.
 - B. the total number of individuals of one species of organisms living in a particular habitat.
 - C. population of different species living together and interacting with each other in one habitat.
 - D. the individuals of a particular group living in an area and sharing the same resources.
25. Which of the following physical factors is likely to affect the distribution of plants in a pond?
- A. Light.
 - B. Humidity.
 - C. Wind.
 - D. Temperature.
26. Which of the following instruments is used for the measurement of wind speed?
- A. Thermometer.
 - B. Hydrometer.
 - C. Barometer.
 - D. Anemometer.
27. A population which exceeds its carrying capacity and then collapses is represented graphically as a ---- curve.
- A. bell-shaped
 - B. skewed
 - C. S-shaped
 - D. linear

28. Which of the following infections would **not** respond to an antibiotic treatment?
- A. Gonorrhea
 - B. Measles.
 - C. Diarrhea.
 - D. Tuberculosis.
29. The vector of the sleeping sickness disease parasite is the ----.
- A. cockroach
 - B. mosquito
 - C. blackfly
 - D. tsetse fly
30. Which of the following organisms are the producers in an aquatic habitat?
- A. Benthos
 - B. Phytoplankton.
 - C. Zooplanktons.
 - D. Newtons.
31. Which of the following enzymes does **not** belong to proteases?
- A. Sucrose.
 - B. Pepsin.
 - C. Trypsin.
 - D. Resin.
32. Which of the following protozoans feeds parasitically?
- A. Paramecium.
 - B. Chlamydomonas.
 - C. Plasmodium.
 - D. Euglena.
33. The amount of energy passed from one tropic level to the next decreases because ----.
- A. many organisms are present at the first tropic level
 - B. many organisms occur at the higher tropic level
 - C. more energy is conserved at lower tropic level
 - D. part of the organisms remains unutilized at each tropic level
34. Which of the following enzymes is **not** one of the main classes of enzymes?
- A. Sucrose.
 - B. Amylases.
 - C. Lipase.
 - D. Proteases.
35. The site for production of ATP in a cell is ----.
- A. Ribosome.
 - B. Cytoplasm.

- C. Golgi body.
 - D. Mitochondrion.
36. The mode of nutrition common to green plants is ----.
- A. autotrophic
 - B. heterotrophic
 - C. holozoic
 - D. saprophytic
37. Enzymes can be inactivated by certain chemical substances in the body called ----.
- A. catalysts
 - B. inhibitor
 - C. substrates
 - D. activator
38. A change in the environment of an organism is termed ----.
- A. sensitivity
 - B. impulse
 - C. response
 - D. stimulus
39. The following life processes are common to both plant and animal **except**;
- A. respiration.
 - B. growth.
 - C. reproduction.
 - D. photosynthesis.
40. Which of the following statements is correct about organs?
- A. They are composed of specialized cells.
 - B. They perform certain overall functions.
 - C. They are not found in plants.
 - D. Unicellular animals have few organs.
41. The structure used for movement in amoeba is ----.
- A. cilia
 - B. pseudopodia
 - C. flagella
 - D. endoplasm
42. Which of the following vertebrae provide articulating surfaces for the ribs?
- A. Thoracic.
 - B. Lumbar
 - C. Cervical.
 - D. Sacral.
43. Which of the following is **not** a component of the appendicular skeleton?

- A. Ulna.
 - B. Atlas.
 - C. Femur.
 - D. Pelvic girdle.
44. Which of the following food substances would produce a translucent mark when rubbed on a white paper?
- A. Potato.
 - B. Beans.
 - C. Mango.
 - D. Groundnut.
45. Which of the following groups embraces the rest?
- A. Class.
 - B. Kingdom.
 - C. Phylum.
 - D. Species.
46. The group molluscs is characterized by the presence of ----.
- A. jointed appendages
 - B. star-shaped bodies
 - C. backbone
 - D. soft, non-segmented bodies
47. A serious disadvantage of complexity in higher organisms is ---.
- A. a higher demand for food and energy
 - B. ability to function in many specialized roles
 - C. little amount of energy dissipated in functioning
 - D. specialization of parts of the body.
48. Raw materials required by green plants to manufacture their foods are ----.
- A. mainly fluid
 - B. inorganic substances
 - C. living materials
 - D. mainly gases
49. A virus can sometimes be regarded as a living organism because it ----.
- A. causes diseases in plants and animals
 - B. exists in a variety of shape
 - C. reproduce in living cell
 - D. is easily visible with the aid of an electron microscope
50. Which of the following substances pass through the root cell membrane by osmosis?
- A. Cell sap
 - B. Carbon dioxide.

- C. Oxygen.
- D. Water.

SECTION **B: THEORY**

Time: 2hour.

- 1a. Make a well labelled drawing of a typical plant cell and give the function of **two** labelled organelles. 5 marks.
- 1b. Describe briefly the modifications and the mechanisms associated with the feeding habits of;
- i. filter feeding in mosquito
 - ii. parasitic feeding in tapeworm
- 5 marks.
- 1c. Describe **two** methods each for;
- i. improving crop yield.
 - ii. preserving and storing food.
- 5 marks.
- 2a. List the principal sense organs in mammals and their functions. 5 marks.
- 2b. Give **three** examples of each of the following;
- i. plant parasite.
 - ii. saprophytic plant.
 - iii. carnivorous plants.
- 5 marks.
- 2c. Draw a well labelled human digestive tract. 5 marks.
- 3a. Describe the role of the following in mammalian nutrition;
- i. teeth.
 - ii. tongue.
 - iii. saliva.
 - iv. oesophagus.
 - v. ileum.
- 5 marks.
- 3b. With reference to the food chain, explain the roles of the following;
- i. green plants.
 - ii. herbivores.
 - iii. carnivores.
 - iv. decomposers.
- 5 marks.
- 3c. State **five** ways of improving crop yield end **five** effects of food storage. 5 marks.

- 4a. Explain in detail the relationship between the following as regards food availability and human population;
- i. reproduction.
 - ii. migration.
 - iii. death. 5 marks.
- 3b. State **four** ways to prevent tooth decay. 2 marks.
- 4bii. State the dental formula of man. 2 marks.
- 4biii. What is digestion? 1 mark.
- 4c. In detail, describe what happens in small intestine. 5 marks.