

SS3 BIOLOGY EXAMINATION QUESTIONS

Subject: Biology Class: Senior Secondary School Three (SS3)

SECTION A: OBJECTIVE QUESTIONS (20 MARKS)

Instruction: Choose the correct answer from options A–D.

1. The basic unit of heredity is the

- A. cell B. gene C. tissue D. chromosome

2. The physical appearance of an organism is called its

- A. genotype B. phenotype C. allele D. gamete

3. Which of the following determines the sex of a human child?

- A. The mother's egg alone B. The father's sperm C. The mother's blood group D. The child's food

4. The process by which organisms produce offspring is called

- A. respiration B. excretion C. reproduction D. nutrition

5. The passing of characteristics from parents to offspring is known as

- A. variation B. evolution C. heredity D. adaptation

6. Which of the following is an example of continuous variation?

- A. Blood group B. Tongue-rolling ability C. Human height D. Sex

7. The scientific study of the relationship between organisms and their environment is called

- A. ecology B. anatomy C. genetics D. physiology

8. A group of organisms of the same species living in a particular area is called a

- A. community B. population C. habitat D. biome

9. Which of the following is a producer in an ecosystem?

- A. Goat B. Grass C. Lion D. Mushroom

10. The first trophic level in a food chain is occupied by

- A. carnivores B. decomposers C. producers D. herbivores

11. Which of the following is a decomposer?

- A. Green plant B. Mushroom C. Grasshopper D. Lizard

12. The process by which green plants manufacture food is called

- A. transpiration B. photosynthesis C. fermentation D. digestion

13. The organelle responsible for photosynthesis is the

- A. mitochondrion B. nucleus C. chloroplast D. ribosome

14. The functional unit of the kidney is the

- A. neuron B. nephron C. alveolus D. villus

15. The main function of red blood cells is to

A. fight infections B. transport oxygen C. produce hormones D. digest food

16. Which of the following diseases is caused by a virus?

A. Tuberculosis B. Malaria C. Measles D. Cholera

17. The process by which organisms become better suited to their environment is called

A. adaptation B. excretion C. digestion D. pollination

18. Which of the following is a vestigial structure in humans?

A. Heart B. Appendix C. Kidney D. Brain

19. The union of male and female gametes is called

A. pollination B. fertilisation C. germination D. implantation

20. The ultimate source of energy for most ecosystems is the

A. soil B. moon C. sun D. wind

SECTION B: THEORY QUESTIONS

Instruction: Answer any four questions.

Genetics and Heredity

- a. Define heredity.
- b. Explain the meaning of genotype and phenotype.
- c. Differentiate between homozygous and heterozygous conditions.
- d. Using a genetic diagram, show a cross between two heterozygous tall pea plants, where tallness (T) is dominant over dwarfness (t). State the genotypic and phenotypic ratios.

Excretion in Mammals

- a. Define excretion.
- b. Name four excretory organs in humans and state one function of each.

Reproduction and Variation

- a. Define reproduction.
- b. Differentiate between sexual and asexual reproduction.