

Class 10 Science (Biology) Practice Paper

Comprehensive Chapter-wise Important Questions

Based on the Latest Exam Pattern

General Instructions:

- This practice paper contains questions from all major Biology chapters: *Life Processes, Control and Coordination, How do Organisms Reproduce?, Heredity and Evolution, and Our Environment.*
- Section A contains Multiple Choice Questions (1 mark each).
- Section B contains Very Short Answer Type Questions (1-2 marks each).
- Section C contains Short Answer Type Questions (3 marks each).
- Section D contains Long Answer Type Questions (5 marks each).
- Wherever necessary, neat and properly labeled diagrams should be drawn.

Section A: Multiple Choice Questions (1 Mark Each)

1. The autotrophic mode of nutrition requires:
 - (a) Carbon dioxide and water
 - (b) Chlorophyll
 - (c) Sunlight
 - (d) All of the above
2. The breakdown of pyruvate to give carbon dioxide, water, and energy takes place in:
 - (a) Cytoplasm
 - (b) Mitochondria
 - (c) Chloroplast
 - (d) Nucleus
3. The gap between two adjoining neurons is called a:
 - (a) Dendrite
 - (b) Synapse
 - (c) Axon
 - (d) Impulse
4. Which of the following is an example of homologous organs?
 - (a) Our arm and a dog's foreleg
 - (b) Our teeth and an elephant's tusks

- (c) Potato and runners of grass
 - (d) All of the above
5. Which of the following constitute a food chain?
- (a) Grass, wheat, and mango
 - (b) Grass, goat, and human
 - (c) Goat, cow, and elephant
 - (d) Grass, fish, and goat

Section B: Very Short Answer Type Questions (1-2 Marks Each)

- 6. Name the tissue responsible for the transportation of water and minerals in plants.
- 7. What is the role of saliva in the digestion of food?
- 8. Name the plant hormone responsible for the promotion of cell division.
- 9. Define vegetative propagation and give one example of a plant that reproduces by this method.
- 10. What is a food web? How is it different from a food chain?
- 11. Why are traits acquired during the lifetime of an individual not inherited?
- 12. State the function of the receptor organs present in our body.

Section C: Short Answer Type Questions (3 Marks Each)

- 13. **Life Processes:** Differentiate between aerobic and anaerobic respiration. Write the chemical equation for aerobic respiration.
- 14. **Excretion:** Explain the mechanism of urine formation in the human excretory system.
- 15. **Control and Coordination:** What is a reflex arc? Trace the sequence of events which occur when a bright light is focused on your eyes.
- 16. **Reproduction:** Differentiate between self-pollination and cross-pollination. Explain the role of the pollen tube in fertilization.
- 17. **Heredity:** How is the sex of the child determined in human beings? Explain with the help of a flowchart.
- 18. **Our Environment:** What is ozone and how does it affect any ecosystem? Explain the cause of the depletion of the ozone layer.

Section D: Long Answer Type Questions (5 Marks Each)**19. Human Digestive System:**

- (a) Draw a neat, labeled diagram of the human alimentary canal.
- (b) Explain the process of digestion of food in the mouth, stomach, and small intestine.
- (c) What is the function of villi in the small intestine?

20. Human Heart and Circulation:

- (a) Draw a schematic representation of transport and exchange of oxygen and carbon dioxide in the human body.
- (b) Why is it necessary to separate oxygenated and deoxygenated blood in mammals and birds?
- (c) Define double circulation.

21. Reproduction in Humans:

- (a) Describe the various methods of contraception in human beings.
- (b) What are the advantages of adopting contraceptive measures?
- (c) Explain the changes that occur in the human female reproductive system if the egg is not fertilized.

22. Heredity (Mendel's Laws):

- (a) State Mendel's Law of Segregation and Law of Independent Assortment.
- (b) A tall pea plant (TT) is crossed with a short pea plant (tt). What will be the genotype and phenotype of the F_1 generation?
- (c) If the F_1 plants are self-pollinated, what will be the phenotypic ratio of the F_2 generation? Show the cross using a Punnett square.

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