

Class IX – Biology Worksheet

Section A: Multiple Choice Questions (MCQs)

(1 × 5 = 5 marks)

1. The cell organelle responsible for protein synthesis is:
 - a) Mitochondria
 - b) Ribosome
 - c) Golgi apparatus
 - d) Lysosome
 2. Which tissue helps in the transport of food in plants?
 - a) Xylem
 - b) Phloem
 - c) Cambium
 - d) Parenchyma
 3. Which of the following is a dead tissue?
 - a) Parenchyma
 - b) Collenchyma
 - c) Sclerenchyma
 - d) Meristem
 4. Which method is used to improve crop yield by crossing different varieties?
 - a) Mixed cropping
 - b) Crop rotation
 - c) Hybridization
 - d) Organic farming
 5. The powerhouse of the cell is:
 - a) Nucleus
 - b) Ribosome
 - c) Mitochondria
 - d) Vacuole
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Section B: Assertion and Reason Questions

(1 × 2 = 2 marks)

(Choose the correct option)

- A. Both Assertion and Reason are true, and Reason is the correct explanation of Assertion
- B. Both Assertion and Reason are true, but Reason is not the correct explanation
- C. Assertion is true, Reason is false
- D. Assertion is false, Reason is true

1. **Assertion:** Mitochondria have their own DNA.
Reason: Mitochondria can synthesize some of their own proteins.
 2. **Assertion:** Xylem tissue transports water in plants.
Reason: Xylem is made up of living cells only.
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Section C: Very Short Answer Questions

(1 × 4 = 4 marks)

1. Who discovered the cell?
 2. Name the tissue that covers the surface of the body.
 3. What is manure?
 4. Name the fluid medium present inside the cell.
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Section D: Short Answer Questions

(2 × 4 = 8 marks)

1. Write any two differences between prokaryotic and eukaryotic cells.
 2. What are meristematic tissues? Name their types.
 3. Define mixed cropping and state one advantage.
 4. What is plasma membrane? Write one function.
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Section E: Long Answer Questions

(5 × 2 = 10 marks)

1. Describe the structure and functions of the nucleus.

OR

Explain different types of plant tissues with examples.

2. What is crop improvement? Explain any three methods used to improve food resources.
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Section F: Case Study Based Question

(5 marks)

Farmers in a village were facing low crop yield due to poor soil fertility and pest attacks. An agricultural expert suggested the use of crop rotation, use of manures and fertilizers, and improved crop varieties through hybridization.

Answer the following questions:

- a) What is crop rotation? (1 mark)
- b) Name one advantage of using manure. (1 mark)
- c) What is hybridization in crop improvement? (1 mark)
- d) How does pest resistance help in increasing yield? (1 mark)
- e) Name any one improved food resource practice. (1 Mark)