

Time: 1 Hour 30 Minutes

Max. Marks: 40

Instructions:

1. The question paper has 4 sections and 17 questions. Answer all the questions.
2. Section A: 10 multiple choice questions of 1 mark each.
3. Section B: 3 questions of 2 marks each. Section C: 2 questions of 4 marks each (Q 15 has a choice).
4. Section D: 2 questions of 8 marks each, with internal choice.
5. Draw neat, labelled diagrams wherever necessary.

SECTION – A

10 × 1 = 10

Choose the correct answer and write its letter.

1. The cell was first observed by
A) Robert Brown B) Robert Hooke C) Leeuwenhoek D) Purkinje
2. The powerhouse of the cell is
A) ribosome B) nucleus C) mitochondria D) Golgi apparatus
3. The organelle in which photosynthesis takes place is
A) chloroplast B) lysosome C) vacuole D) leucoplast
4. The organelles known as the 'suicide bags' of the cell are
A) ribosomes B) lysosomes C) plastids D) vacuoles
5. The movement of water molecules through a selectively permeable membrane is called
A) diffusion B) osmosis C) transpiration D) endocytosis
6. Which of the following is absent in animal cells?
A) cell membrane B) nucleus C) cell wall D) mitochondria
7. The tissue responsible for the growth in length of the root and stem is
A) apical meristem B) lateral meristem C) parenchyma D) xylem
8. Xylem transports
A) food B) water and minerals C) hormones D) gases
9. The muscle that works throughout life without getting tired is
A) striated muscle B) smooth muscle C) cardiac muscle D) skeletal muscle
10. The connective tissue that joins a muscle to a bone is
A) ligament B) tendon C) cartilage D) areolar tissue

SECTION – B

3 × 2 = 6

11. Write any two differences between prokaryotic and eukaryotic cells.
12. What happens when dried raisins are kept in water for some time? Give the reason.
13. Why is blood considered a connective tissue?

SECTION – C

2 × 4 = 8

14. Write any four differences between a plant cell and an animal cell.

15. Draw a neat labelled diagram of any one of the following:

A) A plant cell

(OR)

B) A neuron

SECTION – D

2 × 8 = 16

Each question has an internal choice. Answer either (A) or (B).

16. A) Explain the structure and functions of the nucleus, endoplasmic reticulum, Golgi apparatus and vacuoles.

(OR)

B) Describe the lab activity you did to observe the cells of an onion peel. Write the materials, procedure and observations, and draw what you saw under the microscope.

17. A) Explain the three types of simple permanent tissues in plants — parenchyma, collenchyma and sclerenchyma — with their structure, location and functions. Draw diagrams.

(OR)

B) Describe the different types of epithelial tissue in animals. Mention where each is found and what it does.

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