

TEST PAPER – Chapter 2 (45 min, 20 marks)

Q1–Q3. Multiple Choice Questions (1 mark each)

1. Which layer of anther provides nourishment to developing pollen grains?
 - a) Epidermis
 - b) Endothecium
 - c) Tapetum
 - d) Middle layer
2. How many haploid nuclei are present in a mature embryo sac?
 - a) 6
 - b) 7
 - c) 8
 - d) 4
3. Pollination by water is seen in:
 - a) Vallisneria
 - b) Pea
 - c) Maize
 - d) Wheat

Q4–Q5. Assertion–Reasoning (1 mark each)

Options:

- a) Both A & R true, R explains A
- b) Both A & R true, R does not explain A
- c) A true, R false
- d) A false, R true

Q4.

Assertion (A): Endosperm is a triploid tissue in angiosperms.

Reason (R): It results from fusion of two male gametes with two polar nuclei.

Q5.

Assertion (A): Tapetum secretes sporopollenin.

Reason (R): Sporopollenin forms the exine of pollen grains.

Options: Same as above

Q6. Application-Based Question (4 marks)

A pollen tube reaches the embryo sac carrying two male gametes.

Answer:

- a) What is the fate of each male gamete? (1)
- b) Name the product formed after fusion of male gamete with the central cell. (1)
- c) Why is this process called double fertilization? (1)
- d) State its significance. (1)

Q7–Q9. Short Answer Questions (2 marks each)

7. Define apomixis and mention its significance in agriculture.
8. Differentiate between autogamy and geitonogamy.

9. State two adaptations for insect-pollinated flowers.

Q10–Q11. Short Answer Questions (3 marks each)

10. Explain the process of microsporogenesis in angiosperms.
11. Why are pollen grains produced in large numbers in plants like maize and wheat? Explain.

Q12. Long Answer Question (4 marks)

12. Describe the steps of fertilization in angiosperms with a labeled diagram.

