

EKALAVYA CLASS (2025-26)

CLASS VIII

TIME- 1 HR

REPRODUCTION IN ANGIOSPERMS

F.M.-30

I. Multiple choice questions:

(1*10=10)

1. Generative nucleus divides forming
 - a. 2 male nuclei
 - b. 3 male nuclei
 - c. 2 female nuclei
 - d. 3 female nuclei
2. A dioecious flowering plant prevents
 - a. Geitonogamy and xenogamy
 - b. Autogamy and xenogamy
 - c. Autogamy and geitonogamy
 - d. None of the above
3. What is the function of the filiform apparatus?
 - a. Guide the entry of pollen tube
 - b. Recognize the suitable pollen at the stigma
 - c. Produce nectar
 - d. Stimulate division of the generative cell
4. Which of the following is similar to autogamy, but requires pollinators?
 - a. Geitonogamy
 - b. Cross pollination
 - c. Apogamy
 - d. Xenogamy
5. Assertion (A): Mitotic cell division takes place in body cells, while meiotic cell division takes place in sex cells.
Reason (R): Chromosome number reduced to half in mitotic cell division and same number of chromosomes is retained in meiotic cell division.
 - a. Both A and R are true, and R is the correct explanation of A
 - b. Both A and R are true, but R is not the correct explanation of A
 - c. A is true, but R is false
 - d. A is false, but R is true

6. Assertion.Mitosis is a means of multiplication in the unicellular organisms.
Reason.Mitosis in multicellular organisms brings about growth and repair.
- Both A and R are true, and R is the correct explanation of A
 - Both A and R are true, but R is not the correct explanation of A
 - A is true, but R is false
 - A is false, but R is true
7. In _____, female gametophytes stop their growth at 8 nucleate stages.
- Algae
 - Ferns
 - Gymnosperms
 - Angiosperms
8. The pollen tube is attracted to the _____ end of the embryo sac.
- Micropylar
 - Hilum
 - Synergid
 - generative
9. Assertion (A): Fertilization in flowering plants ensures genetic variation.
Reason (R): Fertilization involves the fusion of gametes from different individuals.
- Both A and R are true, and R is the correct explanation of A
 - Both A and R are true, but R is not the correct explanation of A
 - A is true, but R is false
 - A is false, but R is true
10. Which of the following ensures that fertilization is species-specific in flowering plants?
- Pollen viability
 - Stigma receptivity
 - Pollen-pistil interaction
 - Flower color

II. Answer the following questions in short:

(2*6= 12)

11. Explain the structure of a mature pollen grain and relate its features to its function in fertilization.
12. A student observed that both male gametes from a pollen grain enter the embryo sac. Justify why two gametes are needed.
13. Why is fertilization considered a critical event in the sexual reproduction of flowering plants?
14. What are the main differences between microsporogenesis and megasporogenesis?
15. The megaspore mother cell develops into 7-celled, 8 nucleate embryo sac in an angiosperm. Draw a labelled diagram of a mature embryo sac.
16. Why is cross-pollination more advantageous than self-pollination?

III. Answer in brief:

(4*2=8)

17. What is double fertilization? Explain with the help of a diagram. Why is it considered unique to angiosperms?
18. Differentiate between mitosis and meiosis based on their purpose and outcomes.