

Test Assignment: Biology

Topic: Sexual Reproduction in flowering plants

Class: 12th

1. The layer of anther responsible for providing nutrition to developing pollen grains is:

- a) Endothecium
- b) Tapetum
- c) Epidermis
- d) Middle layer

2. In angiosperms, double fertilization involves:

- a) Two egg cells
- b) One egg and one synergid
- c) One egg and two polar nuclei
- d) Two sperm nuclei with two eggs

3. The ploidy of endosperm in angiosperms is:

- a) Haploid
- b) Diploid
- c) Triploid
- d) Tetraploid

4. The embryo sac is also called:

- a) Male gametophyte
- b) Female gametophyte
- c) Sporophyte
- d) Zygote

5. Assertion (A): Endosperm is formed before embryo development.

Reason (R): Endosperm provides nutrition to the developing embryo.

- a) Both A and R true, R explains A
- b) Both true, but R not explanation
- c) A true, R false
- d) A false, R true

6. Assertion (A): Pollen grains have a mucilaginous covering on them in most of the water pollinating plants.

Reason (R): Mucilaginous covering helps pollen grains be submerged in water.

- a) Both A and R true, R explains A
- b) Both true, but R not explanation
- c) A true, R false
- d) A false, R true

7. Outermost protective layer of ovule: _____

8. Opening in ovule through which pollen tube enters: _____

9. State few functions of tapetum in angiosperm plants?

10. Differentiate between self-pollination and cross-pollination (any 3 points).

11. A plant is having brightly coloured open flowers and ensuring only xenogamy what are the various outbreeding devices in flowering plants that ensure pollination in this plant?

12. Chasmogamous flowers remain open to expose their reproductive parts. Explain how this structural feature supports different types of pollination.

13. Explain the role of stigma in pollen-pistil interaction.

14. Describe the post-pollination events leading to double fertilisation in angiosperm starting with 2-celled pollen grain.

15. A plant produces seeds without fertilization, and the offspring are genetically identical to the parent plant. Answer the following:

- 1. Name the phenomenon.
- 2. What type of reproduction does it represent?
- 3. Give one example.