

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

B

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

C

3. The ploidy of endosperm in angiosperms is:

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

C

4. The embryo sac is also called:

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

B

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

A

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

C

7. Outermost protective layer of ovule: Integuments

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

9. State few functions of tapetum in angiosperm plants?

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

2

B

- 3 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?
- 3 12. Chasmogamous flowers remain open to expose their reproductive parts. Explain how this structural feature supports different types of pollination.
- 3 13. Explain the role of stigma in pollen pistil interaction.
- 5 14. Describe the post pollination events leading to double fertilisation in angiosperm starting with 2-celled pollen grain.
- 3 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 advantage of this process in agriculture.