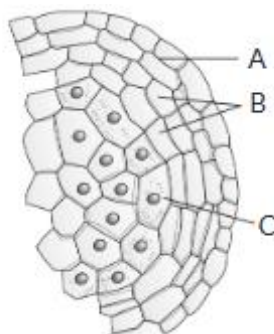


Case study, MCQ, SAQ

Revision Test

FM 15

1. CS:



The given diagram shows microsporangium of a mature anther. Identify A, B and C.

- a. A-Middle layer B-Endothecium C-Tapetum
- b. A-Endothecium B-Tapetum C- Middle layer
- c. A-Endothecium B-Middle layer C-Tapetum
- d. A-Tapetum B-Middle layer C-Endothecium

2. Which function of tapetum is correct?

- a. Helps in pollen wall formation.
- b. Transportation of nutrients to inner side of anther.
- c. Synthesis of callase enzyme for separation of microspore tetrads.
- d. All of the above

CS: Pollen-pistil interaction is the group of events that occur from the time of pollen deposition over the stigma to the time of pollen tube entry into ovule. It is a dynamic process which has checks at several places for promotion or inhibition of pollen growth. Pollen-pistil interaction is a safety measure to

ensure that illegitimate crossings do not occur. Compatibility and incompatibility of the pollen-pistil is determined by special proteins. The compatible pollens are able to absorb water and nutrients from the surface of the stigma. They germinate and produce pollen tubes. Pollen tubes grow into the style. Their growth and path through the style are also determined by specific chemicals.

3. Which of the following parts of gynoecium determines the compatible nature of pollen? a. Stigma b. Style c. Ovary d. Thalamus

4. Pollen-pistil interaction is a:

- (a) Static process
- (b) Random process
- (c) Chemically mediated and genetically controlled process
- (d) Biologically inactive process

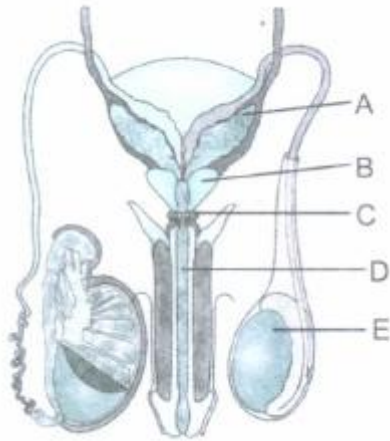
5. In gametophytic self-incompatibility, the incompatibility is determined by:

- (a) The genotype of the pollen tube
- (b) The genotype of the pistil
- (c) The genotype of the sporophytic tissue
- (d) The genotype of the pollen

6. Which of the following is an example of an outbreeding device?

- (a) Cleistogamy
- (b) Self-incompatibility
- (c) Autogamy
- (d) Apomixis

7.

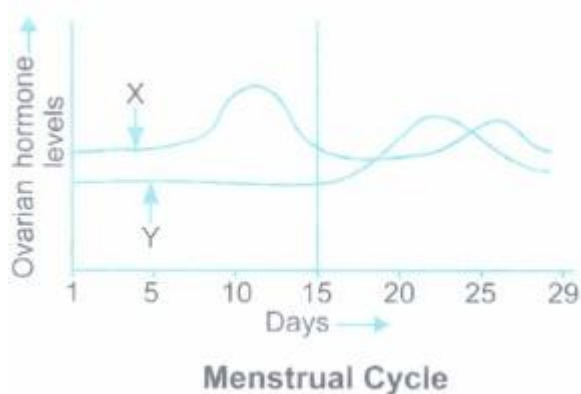


A diagrammatic sketch of the human male reproductive system is given above.

(a) Identify and name the three glands associated with the human male reproductive system. What is the term given to their secretions?

(b) Name the primary sex organ and the pouch in which it is located in human beings.

8.



Read the graph given above and answer the following questions:

(a) Identify the ovarian hormones X and Y and name their respective sources in the ovary.

(b) Why does the hormone X peak before the hormone Y?