

2016

BOTANY

( Major )

Paper : 4-1

**( Morphology, Palynology and Embryology  
of Angiosperms )**

Full Marks : 60

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

1. Answer the following : 1×7=7
- (a) What is monstrous development?
  - (b) Write the name of sticky nature of pollen grains.
  - (c) What is circinotropous ovule?
  - (d) What is cap block?
  - (e) What is liquid syncytium?
  - (f) Where embryoids are developed?
  - (g) Why and how culture tubes are plugged?

2. Answer the following : 2×4=8

- (a) Explain dimorphic tapetum.
- (b) Write about the perisperm and endosperm.
- (c) What is polyspermy?
- (d) Write about the primitive stamen.

3. Answer any *three* of the following : 5×3=15

- (a) Describe the importance of morphology in respect to natural system of plant classification.
- (b) Describe the modern aspects of palynology.
- (c) Describe the haploid culture and its significance.
- (d) Describe the pollen sterility in angiospermic plants.
- (e) What is apomixis? Describe the non-recurrent apomixis with neat diagram.

4. Answer the following : 10×3=30

- (a) What is double fertilization? Describe in detail about the fertilization of angiospermic plants with diagram.



Or

What is endosperm? Describe various types of endosperm found in Angiosperms with neat diagram.

- (b) Describe in detail about the various structure and types of female gametophyte with neat diagram.

Or

Describe in detail about the development of male gametophyte in angiospermic plants.

- (c) Describe the various theories in relation to origin and evolution of Angiosperms.

Or

Explain the theories based on vascular anatomy of the flower in support of inferior ovary.

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