

1 (Sem-6/FYUGP) BOT 62 MJ

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BOTANY

(Major)

Paper : BOT0600204

(Reproductive Biology of Angiosperm)

Full Marks : 45

Time : 2 hours

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

1. Answer the following as directed : 1×5=5

- (a) What is parasexual hybridization?
- (b) Name the term used for 'arrangement of ovule in the ovary'.
- (c) What are hypostases?
- (d) A hydrophilic substance that forms the pollen coat material is _____.
(Fill in the blank)
- (e) In NPC system, P stands for _____.
(Fill in the blank)

(2)

2. Answer any *five* of the following questions :

2×5=10

- (a) What is florigen? What is its function?
- (b) Write a note on perisperm.
- (c) What do you understand by double fertilization? Who discovered it?
- (d) Write about the contribution of P. Maheshwari in the field of embryology.
- (e) How cybrids are different from hybrids?
- (f) Distinguish between self-incompatibility and male sterility.
- (g) Write a short note on male germ unit (MGU).
- (h) Draw a labelled diagram of LS of ovule structure.
- (i) What do you mean by gynodioecy and androdioecy?
- (j) Differentiate between Anemophily and Entomophily.

(3)

3. Answer any *four* of the following questions :

5×4=20

- (a) "Flower is a modified shoot." Elaborate the statement.
- (b) What is sporophytic self-incompatibility? Write the differences between SSI and GSI. 1+4=5
- (c) Discuss the various methods of Pollen storage.
- (d) Describe the causes of polyembryony.
- (e) "Callose plays an important role in microsporogenesis." Discuss.
- (f) Discuss the significance of seed dispersal. Add a note on hydrochory. 2+3=5
- (g) Describe two methods to overcome self-incompatibility.
- (h) Write a note on the NPC system of pollen classification.

4. Answer any *one* of the following questions : 10

- (a) What are the different types of endosperms? Describe the endosperm haustoria found in different angiosperms with suitable diagram.

2+8=10

- (b) What are the basic aspects of palynology? Discuss the scope of palynological studies. 2+8=10
- (c) Discuss different types of Apomixis in plants and their application in plant breeding. 6+4=10
- (d) What is megagametogenesis? Describe in detail the structure and development of tetrasporic mature female gametophyte. 2+8=10

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