3 (Sem–5/CBCS) BOT HC 1

2025

BOTANY

(Honours Core)

Paper : BOT–HC–5016

(Reproductive Biology of Angiosperm)

Full Marks : 60

Time : Three hours

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

1. Answer the following questions : 1×7=7

   (a) What are hypostases ?

   (b) What is endothelium ?

   (c) What is pollen viability ?

   (d) What is callose deposition during microsporogenesis ?

(e) What are the ruminate endosperm ?

(f) What is parasexual hybridization ?

(g) What type of pollinium are produced by most of the orchids and milkweeds?

2. Answer the following in brief : 2×4=8

(a) Distinguish between self-incompatibility and male sterility.

(b) What do you mean by double fertilization in angiosperms ?

(c) What are cybrids ?

(d) What do you mean by Gametophytic self-sterility and Sporophytic-self sterility ?

3. Answer the following questions briefly : ***(any three)*** 5×3=15

(a) Write a note on storage and germination of pollen grains.

(b) Write the adaptations of hydrophilous flowers.

(c) Write the differences between dicot and monocot embryo development.

(d) Describe the causes of polyembryony.

(e) Write a note on NPC system of pollen classification.

4. Answer the following questions : ***(any three)***

(a) Describe the fertilization process starting from the entry of pollen tube into the ovule. 10

(b) Elaborate the causes and applications of apomixis in plants. 10

(c) What is self-incompatibility ? Describe the different methods to overcome self-incompatibility in plants. 10

(d) What are the different types of endosperms ? Describe the endosperm haustoria found in different angiosperms with suitable diagram. 2+8=10

(e) Draw and describe the dicotyledonous embryo and its development. 10

(f) Describe the microsporogenesis and microgametogenesis process with suitable diagram. 10
