Total number of printed pages–4

3 (Sem–5/CBCS) BOT HC 1

2021

(Held in 2022)

BOTANY

(Honours)

Paper : BOT–HC–5016

(Reproductive Biology of Angiosperms)

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 type of pollinium are produced by most of the orchids and milkweeds?

   (b) What is parasexual hybridization ?

   (c) What are the ruminate endosperm ?

Contd.

(d) What is callose deposition during microsporogenesis ?

(e) What is pollen viability ?

(f) What is endothelium ?

(g) What are hypostases ?

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

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

(b) What are cybrids ?

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

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

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

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

(b) Describe the causes of polyembryony.

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

(d) Write the adaptations of hydrophilous flowers.

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

4. Answer the following questions :

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

Or

Draw and describe the dicotyledonous embryo and its development. 10

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

Or

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

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

Or

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