*Total number of printed pages–3*

**3 (Sem–5/CBCS) BOT HC 1**



**2024**

**BOTANY**

( Honours )

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)* Who formulated the ABC model of flower development ?

   *(b)* Write the name of the gene which form callose in meiocytes.

   *(c)* What is pollinia ?

   *(d)* What is apomixis ?

   *(e)* What is tapetum ?

*Contd.*

(f) What is the number of APC in *Polygonum* type of embryo sac ?

(g) Define polyembryony.

2. Answer the following questions : 2×4=8

(a) Why the tube nucleus is regarded as "Non-functional Vestigial Structure" ?

(b) Write the functions of tapetum.

(c) Write the differences between Anacatatreme and Zonotreme types of pollen grains.

(d) What is double fertilization ?

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

(a) Discuss about the Pollen Wall Proteins and their significance.

(b) Briefly describe the NPC systems of Pollen Classification.

(c) What is pollination ? Discuss various pollination types in flowering plants.

(d) Justify the statement *Flower is a modified determinate shoot* .



(e) What are the objectives of experimental embryology ?

4. Answer ***any three*** of the following questions : 10×3=30

(a) Discuss the ABC Model of Flower Development in flowering plants.

(b) Describe the microgametophyte development of flowering plants with label diagram.

(c) What is female gametophyte ? Describe in detail, the structure of various types of tetrasporic embryo sacs found in angiosperms. 2+8=10

(d) Discuss the post-fertilization changes within the megasporangium (ovule).

(e) What is endosperm ? Describe various types of endosperms found in Angiosperms with neat diagram. 2+8=10

(f) Write the development of a typical dicotyledonous embryo. Add a note on dispersal of seeds. 6+4=10

———