Total Pages : 8

H-6642

M.Sc. (Semester-IV) Examination, July 2022

BOTANY

(Reproductive Biology of Flowering Plants)

Time Allowed : Three Hours

Maximum Marks : 70

Minimum Passing Marks : 25

Note : This question paper is divided into **four** sections. Attempt questions as per given instructions in each section. Distribution of marks is given in each section.

SECTION-'A'

(Objective Type Questions)

Note : Attempt **any 10** questions. Each question carries **one** mark. [10x1=10]

1. Fill in the blanks :

(i) Chiropterophily means ----------.

(ii) Banana is a ---------- fruit.

(iii) False Fruit in an apple is formed from ----------.

(iv) Genetic male sterility is controlled by ----------.

(v) Pollen-Pistil interaction determines the --------- of the pollen.

(vi) The fruit of Rice and Wheat is called --------.

Multiple choice questions :

(vii) Generative nucleus divides forming :

(a) 2 male nuclei

(b) 3 male nuclei

(c) 2 female nuclei

(d) 3 female nuclei

(viii) Tapetum is a part of :

(a) Male gametophyte

(b) Female gametophyte

(c) Ovary wall

(d) Anther wall

(ix) Incompatibility prevents cross pollination.

(a) Intraspecific

(b) Self

(c) Interspecific

(d) Outbreedings

(x) Which of the following contains the filiform apparatus ?

(a) Zygote

(b) Synergids

(c) Antipodals

(d) Egg

(xi) The embryonic shoot is covered by a protective layer called :

(a) Coleoptile

(b) Coleorrhiza

(c) Scutellum

(d) Aleurone

(xii) A seed is a :

(a) Ripened ovule

(b) Ripened ovary

(c) Ripened endosperm

(d) Fused carpel

Section-'B'

(Very Short Answer Type Questions)

Note : Attempt **any five** questions in 25-30 words each. Each question carries **2** marks. [5x2=10]

2. (i) Anther

(ii) Synergids

(iii) Male germ unit

(iv) Microsporogenesis

(v) Pericarp

(vi) Foraging behaviour

(vii) Ovule

Section-'C'

(Short Answer Type Questions)

Note : Attempt **any five** questions in 250 words each. Each question carries **4** marks. [5x4=20]

3. Write short notes on the following :

(i) Endosperm

(ii) Double Fertilization

(iii) Pollen load

(iv) Pollen-coat formation

(v) Pollen-ovule ratio

(vi) Male specific cytokinesis

(vii) Agamospermy

Section-D

(Essay Type Questions)

Note : Attempt **any three** questions in **500** words each. Each question carries **10** marks. [3x10=30]

4. (i) Describe pseudogamy and autonomous development of endosperm.

(ii) Give an account on Pollination regulation of flower development.

(iii) Describe megasporogenesis and embryo sac development with examples.

(iv) Describe Pollen tube guidance, recognition and rejection reaction.

(v) Describe floral display, attractants and rewards in angiosperms.

------x------