UG/5th Sem/BOT(H)/Pr/19

2019

B.Sc. (Honours)

5th Semester Examination

# BOTANY

## Paper - C11-P

**(Instructions to the Examiners)**

**Reproductive Biology of Angiosperms**

Full Marks : 20 Time : 3 Hours

*The figures in the margin indicate full marks.*
*Candidates are required to give their answers in their own words as far as practicable.*

1. (i) Specimen 'A' and specimen 'B' can be selected from the following members/plants of two different families and supplied alternately to the candidates of the same batch. The preferable families are :

   (a) Malvaceae — *Hibiscus rosa-sinensis*, *Sida* sp.

*[ Turn Over ]*

(b) Asteraceae — *Tridax* sp.

(c) Solanaceae — Any species of *Solanum*.

(ii) Students must endorse their prepared slides to the Examiner(s) for their signature during examination.

2. (i) For specimen - 'C' select any type of pollen grain and supplied to the students to calculate alternately either pollen viability or the percentage of pollen germination.

(ii) Students must endorse the slide and examiners put their signature on examination sheet during this endorsements.

3. (i) Specimen or permanent slide or photograph — 'D' selected from the followings —

(a) Photographs of Intra-ovarian pollination.

(b) Photographs of Test tube pollination.

(c) Tapetum

(d) MMC (permanent slide / photograph)

(e) Pollinia (slide / photograph / fresh material)

(f) Development of dicot embryo.

(ii) Specimen or permanent slide or photograph — 'E' selected from the followings :

(a) Ovule Types — [Anatropous / orthotropous / campylotropous / amphitropous / circinotropous]

(b) Carunncle (permanent slide)

(c) Aril (permanent slide / photograph)

Separate loose sheets should be used for Q. No.-3 for specimens D and E.

4. Candidates should submit the laboratory note book duly signed by the teacher(s). No credit will be given to the candidates of unsigned laboratory note book.

5. Questions related to both theoretical and practical aspects should be asked.

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Paper - C11-P

**Reproductive Biology of Angiosperms**

**(Practical)**

Full Marks : 20 Time : 3 Hours

*The figures in the margin indicate full marks.*
*Candidates are required to give their answers in their own words as far as practicable.*

Answer *all* questions.

1. Make a temporary preparation of the supplied fresh pollen materials of specimen 'A' and pollen materials of specimen 'B', for comparative study of their morphology (Apertural pattern and Ornamentation).

   [Drawing & labelling : 4 (2+2) ; Description : 4 (2+2) 8

*[ Turn Over ]*

2. Make a microscopic preparation of the supplied specimen - 'C' and calculate the pollen viability by TTC method.

   [Preparation of slide : 1 ; Procedure : 2 ; Result and Inference : 2] 5

**Or,**

Make a microscopic preparation of the supplied specimen - 'C' and calculate the percentage of pollen germination by using sucrose solution method.

[Preparation of slide : 1 ; Procedure : 2 ; Result and Inference : 2] 5

3. Identify the specimens or permanent slides or photographs of specimens — 'D' & 'E' with reasons.

   [Reasons : 1 ; Identification : ½] 1½×2=3

4. Laboratory Note Book. 2

5. Viva-voce. 2