

(i) Printed Pages :4

Roll No.

(ii) Questions :9

Sub. Code :

0	1	5	2
---	---	---	---

Exam. Code:

0	0	0	2
---	---	---	---

B.A./B.Sc.(General) 2nd Semester 1055

BOTANY

Paper - A : Plant Diversity-II

Time : 3 Hours]

[Max. Marks : 68

- Note :-**
- (i) Attempt **five** questions in all.
 - (ii) Q. No. I is compulsory.
 - (iii) Attempt **four** more questions, selecting **one** from each Unit.
 - (iv) Draw diagrams wherever necessary.

(A) Fill in the blanks :

- (i) Mucilage cavities are seen in the _____ of _____.
- (ii) The sporogonium of _____ is exclusively represented by the Capsule.
- (iii) The stalked receptacles bearing archegonia in *Marchantia* are known as _____.
- (iv) The capsules in *Anthoceros* show indefinite growth due to the presence of _____.
- (v) Branched, multicellular and obliquely septate rhizoids are seen in _____.
- (vi) Biflagellate spermatozoids are seen in _____ (Pteridophyte)
- (vii) The dehiscence of the sporangium in *Pteris* takes place at the _____.

- (viii) Two boot-shaped neck-canal cells are seen in the archegonia of _____.
- (ix) The elaters in *Equisetum* spores develop from _____.
- (x) *Rhynia* was discovered in the form of _____.

10x1=10

(B) Multiple choice Questions :

- (i) Which of the following has a leafy gametophyte?
 - (a) *Riccia* (b) *Funaria*
 - (c) *Anthoceros* (d) *Marchantia*
- (ii) The cells are associated with pyrenoids in the that of :
 - (a) *Marchantia* (b) *Riccia*
 - (c) *Anthoceros* (d) Both (a) and (b)
- (iii) The necks of archegonia of *Funaria* contain how many neck-canal cells?
 - (a) 4 (b) 4-10
 - (c) 6 (d) 2
- (iv) The dehiscence of the sporogonium and dispersal of spores takes place by disintegration of Jacket of Capsule and surrounding tissue in :
 - (a) *Marchantia* (b) *Riccia*
 - (c) *Funaria* (d) *Anthoceros*
- (v) How many spiral thickening bands are present on the elaters of *Marchantia*?
 - (a) 2 (b) 3
 - (c) 2 - 3 (d) 4
- (vi) In the aerial stem of *Equisetum* Vallecular canals are present in :
 - (a) Cortex (b) Pith
 - (c) Hypodermis (d) Xylem
- (vii) Which of the following genera shows heterospory ?
 - (a) *Equisetum* (b) *Pteris*
 - (c) *Selaginella* (d) *Rhynia*

- (viii) How many Spores are contained in the sporangium of *Pteris*?
- (a) 32 (b) 48
(c) 48 - 64 (d) 64
- (ix) Which of the following is an anisophyllous species of *Selaginella*?
- (a) *S. kraussiana* (b) *S. selaginoides*
(c) *S. rupestris* (d) *S. oregana*
- (x) What type of stele is seen in the rhizome of *pteris* ?
- (a) Protostele (b) Dictyostele
(c) Siphonostele (d) Solenostele

10x1=10

UNIT-I

- II. (a) Describe briefly the external and internal structure of the thallus of RICCIA.
(b) Describe the structure of sporogonium of MARCHANTIA.
- 6x2=12
- III. Draw well labelled diagrams of :
- (a) V.S. of antheridiophore of MARCHANTIA
(b) T.S. of the thallus of RICCIA through sporogonium.
- 6x2=12

UNIT-II

- IV. (a) Give a diagrammatic Sketch of life cycle of FUNARIA.
(b) Describe briefly the structure of sporogonium of ANTHOCEROS.
- 6x2=12

- V. Attempt any **three** of the following :
- (a) Peristome teeth
 - (b) Protonema
 - (c) Rhizoids of *Funaria*
 - (d) Vegetative reproduction in *Anthoceros*.
- 4x3=12

UNIT-III

- VI. (a) Describe the sporophyte of RHYNIA.
(b) Draw a well labelled diagram of T.S. of stem of SELAGINELLA (Monostelic).
- 6x2=12
- VII. Write notes on any **three** :
- (a) Strobilus of SELAGINELLA
 - (b) Ligule
 - (c) RHIZOPHORES
 - (d) Heterospory and its significance.
- 4x3=12

UNIT-IV

- VIII. Draw well labelled diagrams of :
- (a) V.S. of Strobilus of EQUISETUM
 - (b) T.S. OF RHIZOME of pteris.
- IX. Write notes on any **two** of the following :
- (a) Prothallus of PTERIS
 - (b) External structure of sporophyte of EQUISETUM
 - (c) SPORANGIA OF PTERIS.
- 6x2=12