

(i) Printed Pages : 4

Roll No.

(ii) Questions : 9

Sub. Code :

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Exam. Code :

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

(2053)

BOTANY

Paper : A Plant Diversity-II

Time Allowed : Three Hours]

[Maximum Marks : 36

Note :— Attempt *five* questions in all, including Question No. 1 which is compulsory and selecting *one* question from each unit. Draw well labelled diagrams wherever necessary.

1. (A) Multiple choice questions :

(i) Plants of _____ genus are commonly called “Scouring Rushes”.

(a) *Equisetum*

(b) *Pteris*

(c) *Selaginella*

(d) *Rhynia*

(ii) *Rhynia* plants were discovered in the form of :

(a) Petrifications

(b) Compressions

(c) Impressions

(d) Incrustations

- (iii) Central, solid and sterile column in *Funaria* capsule is :
- (a) Apophysis (b) Annulus
(c) Peristome (d) Columella
- (iv) Which of the following has a leafy gametophyte ?
- (a) *Funaria* (b) *Anthoceros*
(c) *Marchantia* (d) *Riccia*
- (v) Which of the following species of *Selaginella* bears heterophyllous leaves ?
- (a) *S. Kraussiana* (b) *S. Oregana*
(c) *S. Selaginoides* (d) *S. Rupestris*
- (vi) Homosporous condition occurs in :
- (a) *Rhynia* (b) *Pteris*
(c) *Equisetum* (d) All of these $6 \times 1 = 6$

(B) Fill in the blanks :

- (i) Elaters in *Equisetum* are _____ shaped.
- (ii) Phenomenon of formation of two types of spores differing in size, structure and function on the same plant is called _____.
- (iii) Spores in *Funaria* germinate to produce tubular, branched, filamentous and multicellular structure called _____.

- (iv) In *Anthoceros* the elaters lack spiral thickening bands and are called _____.
- (v) The sporogonium of _____ is represented only by capsule.
- (vi) Antherozoids of *Marchantia* bear _____ flagella.
6×1=6

UNIT—I

2. Give an illustrated account of life history of *Riccia*. 6
3. (a) Give an account of the structure of gemmae and their function in *Marchantia*.
- (b) Write a note on the elaters of *Marchantia*. 3,3

UNIT—II

4. (a) Describe the internal structure of stem of *Funaria*.
- (b) Write a note on peristome teeth and their role in *Funaria*. 3,3
5. Describe the external as well as internal features of *Anthoceros* thallus. 6

UNIT—III

6. (a) Draw L.S. of sporangium of *Rhynia*.
- (b) Describe the internal structure of *Rhynia* stem. 3,3

7. Write notes on the following :—

(a) Ligule in *Selaginella*.

(b) Rhizophore in *Selaginella*.

(c) Trabeculae in *Selaginella*.

2,2,2

UNIT—IV

8. (a) Draw L.S. of *Equisetum* cone.

(b) Describe the structure of antherozoid in *Equisetum*. 4,2

9. Write notes on any *two* of the following :—

(a) Sporangial dehiscence and spore dispersal in *Pteris*.

(b) Structure of mature sporangium of *Pteris*.

(c) Prothallus of *Pteris*.

3,3