

2071  
B.A./B.Sc. (General) Second Semester  
Botany  
Paper – A: Plant Diversity – II

Time allowed: 3 Hours

Max. Marks: 36

**NOTE:** Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit. Draw well labeled diagrams wherever necessary.

x-x-x

I. A) Multiple Choice Questions:

- i) Chloroplast is usually associated with pyrenoid in the thallus of:  
(a) *Riccia* (b) *Marchantia*  
(c) *Anthoceros* (d) All of these
- ii) Vallecular and carinal canals are seen in the stem of:  
(a) *Selaginella* (b) *Rhynia*  
(c) *Pteris* (d) *Equisetum*
- iii) Leaves enclosing the group of archegonia in *Funaria* are called \_\_\_\_\_ leaves.  
(a) Paraphyses (b) Perigonial  
(c) Perichaetial (d) Peristome
- iv) The sporophyte of *Anthoceros* is represented by:  
(a) Foot, intercalary meristematic zone and capsule  
(b) Foot, seta and capsule  
(c) Apophysis, theca and operculum  
(d) Spore sac only
- v) Spoon shaped elaters lacking spiral thickening bands occur in:  
(a) *Equisetum* (b) *Marchantia*  
(c) *Anthoceros* (d) *Funaria*
- vi) Which of the following is isophyllous species of *Selaginella*?  
(a) *S. kraussiana* (b) *S. lepidophylla*  
(c) *S. chrysocaulos* (d) *S. rupestris.* (6x1)

P.T.O.

(2)

B) Fill in the blanks:-

- i) Gemma cups occur in the thallus of \_\_\_\_\_.
- ii) Sorus of *Pteris* is continuous linear type and is known as \_\_\_\_\_.
- iii) Young leaves of *Selaginella* shows tongue like growth at the base on adaxial side and it is called \_\_\_\_\_.
- iv) Elaters in *Anthoceros* lack spiral thickening bands and are known as \_\_\_\_\_.
- v) The rhizoids in *Funaria* are branched, multicellular and possess \_\_\_\_\_ septa.
- vi) Spirally coiled antherozoids of *Equisetum* are \_\_\_\_\_ flagellate. (6x1)

UNIT - I

II. Describe briefly the internal structure of *Marchantia* thallus. (6)

III. Write notes on the following:

- a) Rhizoids and scales of *Riccia*
- b) Structure of mature sporogonium of *Riccia*. (3,3)

UNIT - II

IV. Describe the external and internal structure of *Anthoceros* thallus. (6)

V. Give an illustrated account of L.S. capsule of *Funaria*. (6)

UNIT - III

VI. Write notes on the following:

- a) Strobilus of *Selaginella*
- b) Morphological nature of Rhizophore. (3,3)

VII. Give an illustrated account of sporophyte of *Rhynia*. (6)

UNIT - IV

VIII. a) Describe the structure of mature prothallus of *Pteris*.

b) Give an account of *Pteris* sporangium. (3,3)

IX. Describe the *Equisetum* strobilus with illustrations. (6)