

(i) Printed Pages : 3

Roll No.

(ii) Questions : 9

Sub. Code :

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Exam. Code :

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

(2042)

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.

I. (a) Multiple Choice Questions :

(i) Circinately coiled young leaves are seen in :

- (a) *Pteris* (b) *Equisetum*
(c) *Selaginella* (d) *Rhynia*

(ii) Which of the following is true for rhizophores of *Selaginella* ?

- (a) Leafless structures
(b) Bears root caps and root hairs
(c) Endogenous in origin
(d) Negatively geotropic

- (iii) Plants of _____ genus are commonly known as Cord Mosses :
- (a) *Funaria* (b) *Anthoceros*
(c) *Riccia* (d) *Marchantia*
- (iv) Antherozoids in *Equisetum* are spirally coiled and :
- (a) multiflagellate (b) biflagellate
(c) uniflagellate (d) aflagellate
- (v) Mucilage cavities with *Nostoc* colonies occur in the thallus of :
- (a) *Riccia* (b) *Anthoceros*
(c) *Funaria* (d) *Marchantia*
- (vi) In *Marchantia*, the gemmae in gemma cups on dorsal surface of thallus help in :
- (a) Respiration (b) Nutrition
(c) Reproduction (d) Conduction $6 \times 1 = 6$
- (b) Fill in the blanks :
- (i) In *Equisetum* stem _____ meristem is responsible for elongation of internode.
- (ii) The phenomenon of production of two different kinds of spores as seen in *Selaginella* is called _____.
- (iii) In *Funaria* both antheridia and archegonia are interspersed with multicellular sterile hair like structures called _____.
- (iv) The mature sporophyte of *Riccia* is represented by _____ only.

(v) The ventral surface of *Anthoceros* thallus bears _____ rhizoids only.

(vi) In *Marchantia* the receptacle bearing archegonia is called _____.

6×1=6

UNIT-I

II. Give an illustrated account of sporogonium of *Marchantia*. 6

III. Describe the external features and internal structure of the thallus of *Riccia*. 6

UNIT-II

IV. Describe briefly the structure of *Anthoceros* sporogonium. 6

V. (a) Draw L.S. of capsule of *Funaria*.

(b) Write a short note on protonema in *Funaria*. 4,2

UNIT-III

VI. Discuss the structure of sporophyte of *Rhynia*. 6

VII. (a) Draw L.S. of strobilus of *Selaginella*.

(b) Write a note on trabeculae in *Selaginella*. 4,2

UNIT-IV

VIII. (a) Describe in brief the strobilus of *Equisetum*.

(b) Write about elaters of *Equisetum*. 4,2

IX. Give an illustrated account of the structure of sporogonium of *Pteris*. Describe the mechanism of its dehiscence and dispersal of spores. 6