

Roll No.

Total Pages : 3

GSE/M-21

1487

BOTANY

(Diversity of Archegoniates)

Paper-I

Time : Three Hours]

[Maximum Marks : 40

Note : Attempt *five* questions in all, selecting *two* questions from each unit. Question No. 1 is compulsory. Illustrate your answers with suitable diagrams.

Compulsory Question

1. Answer briefly :

- (a) Name an aquatic bryophyte.
- (b) Name the *two* types of rhizoids found in *Marchantia*.
- (c) Why is *Funaria* known as cord moss ?
- (d) What is the difference between elaters and pseudoelaters ?
- (e) Where was the fossil plant *Rhynia* discovered ?
- (f) What are resurrection plants ? Give an example.
- (g) Define heterospory. Give an example of a heterosporous plant.
- (h) Give the botanical name of the plant commonly known as horse tails. (8×1=8)

UNIT-I

2. (a) Draw a neat and well labelled diagram of L.S. of archegoniophore of *Marchantia*.
- (b) Briefly explain vegetative reproduction in *Marchantia* through gamma cups.
- (c) What are elaters and their function. (3+4+1=8)
3. Write briefly on :
- (a) Sporophyte of *Marchantia*.
- (b) Internal structure of thallus of *Anthoceros*. (4+4=8)
4. (a) With the help of suitable diagrams give the details of structure of sporophyte of *Anthoceros*.
- (b) Write a short note on peristome teeth of *Funaria*.
(6+2=8)
5. With neat and well labelled diagrams explain the significant steps in the life cycle of *Funaria*. 8

UNIT-II

6. (a) What are rhizophores in *Selaginella* ? Justify why the rhizophores are known as organs sui-generis ?
- (b) Draw T.S. of stem of *Selaginella* and label it.
- (c) Write a note on male gametophyte of *Selaginella*.
(2+3+3=8)

7. (a) With suitable diagrams explain the structure of strobilus of *Silaginella*.
- (b) Write a brief note on the morphology of stem of *Equisetum*.
- (c) Write a note on sporangiophore of *Equisetum*.
(3+2+3=8)
8. (a) Draw a well labelled diagram of transverse section of stem of *Equisetum* passing through internode. List the hydrophytic and xerophytic characters exhibited by it.
- (b) Write a brief note on the mechanism of dehiscence of sporangium in *Pteris*.
(6+2=8)
9. With schematic diagrams explain the life history of *Pteris*.

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