

MSB
First Semester
LOWER PLANT DIVERSITY - II
(MSB-02)

Duration : 3 Hrs

Full Marks – 70

(Part B : Descriptive)

Duration : 2Hrs 40 minutes

Marks – 50

(The figures in the margin indicate full marks for the Questions)

1) Answer the following question (any two)

2 × 2 = 4

- a) Define leaf traces and leaf gaps.
- b) What are elaters.
- c) Write short note on ligule of Selaginella.
- d) Write short note on vegetative reproduction of Lycopodium.

2) Write Short Notes on (any two)

2^{1/2} × 2 = 5

- a) Gamma cup
- b) Collumella
- c) Alteration of generation
- d) Economic importance of Bryophyte

3) Answer the following question (any two)

3 × 2 = 6

- a) Write any three economic uses of Fern.
- b) Give an account on general characters of Marsilea.
- c) Write in short about the primitive characters of Psilotum?
- d) Describe different stages on the development of spores in Isoetes.

4) Answer the following question (any three)

5 × 3 = 15

- a) Describe with suitable diagram the anatomy of rhizome of Marsilea.
- b) Write on alternation of generation of Selaginella.
- c) Describe with suitable diagram the anatomy of fern stem.
- d) Write on the similarities and differences of Bryophyta with Pteridophyta.
- e) Describe with diagram the life history of *Riccia*

5) Answer the following question (any two)

10 × 2 = 20

- a) Why *Anthoceros* is called horned liverwort? Which characters have made it an interesting plant? Describe with diagram the anatomy of its sporophytes? 2+3+5
- b) Why *Sphagnum* is called as Peat Moss? Describe with diagram the structure of gametophyte. How it reproduces vegetatively? 2+3+5
- c) Explain with diagram the sexual reproduction method of Moss. What are the differences between Liverworts and Mosses? 5+5
- d) What is Bryophyte? Give a general account of it with special references to the classification of the division? 1+5+4

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PART A: Objective

Duration: 20 minutes

Marks – 20

Write the correct answer

20×1= 20

1. The archegonium of a moss produces a(n)
 - a) Sperm cells
 - b) Flower
 - c) Egg
 - d) Spore()
2. The fusion of telomes and mesomes is called as
 - a) Overtopping
 - b) Reduction
 - c) Planation
 - d) Syngensis()
3. The number of ventral canal cells in bryophytes.
 - a) Three
 - b) Two
 - c) One
 - d) Four()
4. The cambium in pteridophytes is
 - a) Present
 - b) Absent
 - c) Present but not well-developed
 - d) Present only in the earlier stage()
5. The stomata where four or more subsidiary cells form a narrow ring around the stoma is known as
 - a) Desmocyctic stomata
 - b) Cyclocyctic type stomata
 - c) Anomocyctic type stomata
 - d) Polycyctic type stomata()
6. The calyptra in *Riccia* is
 - a) Single layered
 - b) Two layered
 - c) Three layered
 - d) Four layered()
7. Inversion of archegoniophore in *Marchantia* begins
 - a) After fertilization
 - b) Before fertilization
 - c) After sporophytic maturity
 - d) Just before spore dispersal()
8. In *Lycopodium*, *Isoetes* and *Equisetum*
 - a) All are homosporous
 - b) *Lycopodium* and *Isoetes* are homosporous
 - c) *Lycopodium* and *Equisetum* are homosporous
 - d) *Isoetes* and *Equisetum* are homosporous()

9. Rhizoids of *Riccia* are
- a) Unicellular smooth c) Multicellular, smooth or tuberculate ()
b) Multicellular smooth d) Unicellular, smooth or tuberculate
10. In *Psilotum* the stele is
- a) Haplostele type c) Eustele type ()
b) Actinostele type d) Plectostele type
11. Pseudoelaters are found in the capsules of
- a) *Anthoceros* c) *Riccia* ()
b) *Marchantia* d) *Polytricum*
12. The conductive tissue differentiation of higher plants is indicated by
- a) Seta of *Sphagnum* c) Apophysis of Moss ()
b) Sterile columella of *Anthoceros* d) Calyptra of *Riccia*
13. Gemma-cups develop for vegetative reproduction in
- a) Moss c) *Anthoceros* ()
b) *Sphagnum* d) *Marchantia*
14. The prothallus in *Equisetum* is
- a) Protandrous c) Both a & b ()
b) Protogynous d) None of the above
15. The thallophyta differs from bryophyte due to the presence of
- a) Stele c) Multicellular sex organs ()
b) Vascular tissues d) Green pigments
16. The sporophytes of *Riccia* is considered simple in structure because it is
- a) Showing a simple sporophytes ()
b) Showing a simple independent gametophyte
c) Showing a combination of complex gametophyte and simple sporophytes
d) Showing a dichotomous branching in the thallus
17. In *Rhopalostachya* type *Lycopodium* plant is _____ .
18. The sporangia in higher ferns are present in a group known as
19. *Lycopodium* is also known as
20. Sporangial development in *Marsilea* is _____ type.
