

**K-369**

Total Pages : 3

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## **MBOT-507**

### **Biology and Diversity of Bryophyta and Pteridophyta**

M.Sc. Botany (MSCBOT)

2nd Semester Examination, 2023 (Dec.)

**Time : 2 Hours]**

**[Max. Marks : 35**

**Note :** This paper is of Thirty Five (35) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

### **SECTION–A**

#### **(Long Answer Type Questions)**

**Note :** Section 'A' contains Five (05) long answer type questions of Nine and Half (9½) marks each. Learners are required to answer any Two (02) questions only.

(2×9½=19)

1. Describe the various methods of reproduction in *Anthoceros*. With the help of well labelled diagram explain antheridial and archigonial development in *Anthoceros*.
2. Give a detailed account of Stelar evolution in Pteridophyte.
3. Give an illustrated account of thallus structure and sporophyte of Bryophyta. Point out the important evolutionary tendencies.
4. Describe the development and structure of the sporophyte of *Marchantia* and compare it with that of *Pellia*.
5. Describe the life history of *Psilotum* in detail. Diagrammatically represent its external morphology and internal structure.

## SECTION-B

### (Short Answer Type Questions)

**Note :** Section 'B' contains Eight (08) short answer type questions of Four (04) marks each. Learners are required to answer any Four (04) questions only. (4×4=16)

1. What is overtopping and syngensis? Discuss the merits and demerits of telome theory.

2. Give a brief account of classification of Bryophytes.
  3. Heterospory led to seed habit-comment. Discuss seed habit in *Selaginella*.
  4. Give an outline of classification of pteridophytes.
  5. Write a short note on :
    - (a) Importance of *Sphagnum*.
    - (ii) *Rhynia*.
  6. Write a short note on progressive evolution theory.
  7. Draw a labelled diagram of following (any *one*) :
    - (i) Stages in the development of sporogonium in *Pellia*
    - (ii) Stages in the development of embryo in *Sphagnum*.
  8. Write the similarities and dissimilarities between Bryophytes and Pteridophytes.
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