

**M. Sc. (Final) Examination, 2001**

**BOTANY**

**Fourth Paper (E)**

**(Advanced Bryology)**

Time—Three Hours  
Maximum Marks—100

Attempt **FIVE** questions in all,  
selecting at least **TWO** questions from each section.  
All questions carry equal marks.

**SECTION A**

1. Give a brief comparative account of the gametophyte and sporophyte of Anthoceros, Phaeoceros and Megaceros.
2. Give an illustrated comparative account of the sporophyte of Sphagnales and Andreaeales.
3. Discuss the criteria of classification of bryophytes into major groups.
4. Write short notes on any **TWO** of the following:-  
Calobryum, Pogonatum, Sphaerocarpos.
5. Write short notes on any **TWO** of the following:-  
Petalophyllum, Plavicina, Corsinia, Monoclea.

**SECTION B**

6. Discuss the responses of bryophytes to air pollution.
7. Give a brief account of the inter-relationships among mosses.
8. Discuss the role of polyploidy in the evolution and speciation of mosses.
9. Write short notes on any **TWO** of the following:-
  - (a) Application of microtechniques in bryological studies.
  - (b) Contributions of Late Prof. S.K. Pande.
  - (c) Salient differences between chloronema and caulonema.
10. Write short notes on any **TWO** of the following:-
  - (a) Regeneration of sporophytic tissues in bryophytes
  - (b) Bryophytes of Rajasthan
  - (c) Chromosome numbers in liverworts.