

Roll No.

Total Pages : 3

MDE/D-23

4431

BRYOPHYTES & PTERIDOPHYTES

Paper–BOT–102

Time Allowed : 3 Hours]

[Maximum Marks : 80

Note : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Answer the following questions : $8 \times 2 = 16$

- Name two bryophyte species used as model plants.
- What is the function of neck canal cells?
- What are epiphyllous hepatics? Give an example.
- Which plant is known as peat moss? Why?
- Why was *Rhynia major* renamed? What is the current valid name?
- Name any one advanced and primitive feature of *Marilea*?
- What is the difference between endoscopic and exoscopic embryo?

(h) What is the morphological nature of rhizophore?

UNIT–I

2. Describe the structure of gametophyte in the following :

- Marchantiales. 8
- Anthocerotales. 8

3. Give a comparative account of the sporophyte in Sphagnales and Funariales. 16

UNIT–II

4. (a) Write a concise note on the following :

- Apogamy
- Apospory. 8

(b) What are the factors that regulate protonemal differentiation in bryophytes? 8

5. How do Physical and Chemical factors regulate *in vitro* gametangia formation? 16

UNIT–III

6. Discuss the following in brief :

(a) Comparative morphology of *Rhynia* and *Zosterophyllum*. 8

(b) Any two form-genera of *Lepidodendron*. 8

7. Describe the Morphological features and reproduction in *Lycopodium*. 16

UNIT-IV

8. Discuss the following :
- (a) Role of pteridophytes in succession. 8
 - (b) Synangia of *Marattia*. 8
9. Describe the Morphological features and reproduction in *Dryopteris*. 16