

# **FD-317**

M.Sc. 1st Semester Examination, Dec.-Jan., 2021-22

## **BOTANY**

Paper - IV

Bryophyta, Pteridophyta and Gymnosperms

Time: Three Hours] [Maximum Marks: 80

[Minimum Pass Marks: 16

Note: Answer all questions. All questions carry equal

marks.

### Unit-I

1. Describe the general characters and ranges of thallus organization in Bryophytes.

## OR

Write notes on any two of the following:

(a) Role of amphithecium and endothecium in different members of Bryophytes

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(Turn Over)

- (b) Elaters, Elaterophores and Pseudoelaters
- (c) Archegoniophore

#### **Unit-II**

2. Describe the 'Stelar system' in pteriodophytes with suitable examples and labelled diagram.

### OR

Write notes on any two of the following:

- (a) Heterospory leading to seed habit
- (b) Prothallus of pteriodophytes
- (c) Root and rhizophore of selaginella

## **Unit-III**

**3.** Describe the general characters and classification of Gymnosperms.

#### OR

Describe the 'Distribution of Gymnosperms' in India.

### **Unit-IV**

4. Give a general account of Pteridospermales.

# OR

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(Continued)

Write notes on any two of the following:

- (a) Centripetal and centrifugal xylem
- (b) Monoxylic and pycnoxylic wood
- (c) Development of male gametophyte of 'Cycas'