

U.G. 4th Semester Examination - 2025**BOTANY****[MAJOR]****Course Code : BOT-MJ-T-4****(Bryophytes and Pteridophytes)****[NEP-2020]**

Full Marks : 40

Time : 2½ Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any five questions: $2 \times 5 = 10$
- a) What is gemma? What is its function?
 - b) What is 'synangium'? Name one pteridophyte where it is found.
 - c) What is trabeculae and where it is found?
 - d) What is meant by heterosporous pteridophyte? Give one example.
 - e) What is 'Bog-moss'? Why is it called so?
 - f) What are the difference between apospory and apogamy?

[Turn over]

- g) What is coenosorus? Cite one example and where it is found.
- h) Name the first land plant and mention its geological occurrence.
2. Answer any two questions: $5 \times 2 = 10$
- Describe the external morphology of the thallus of *Marchantia* with labelled sketches.
 - Write short note on 'fertile spike' of *Ophioglossum*.
 - Write short note on sporocarp of *Marsilea*.
 - Describe briefly the progressive and regressive concept of evolution of Sporophyte in bryophytes.
3. Answer any two questions: $10 \times 2 = 20$
- Describe the characteristic features of the vegetative and reproductive organs of *Anthoceros*. $5+5$
 - Give a comparative account of the anatomical features of *Lycopodium*, *Selaginella* and *Pellia*.
 - Discuss the evolution of land plants in light of Telome concept.
 - Classify pteridophytes by Smith et al (2006) with diagnostic features. Write a brief note on *Lepidodendron*. $7+3$