

U.G. 3rd Semester Examination - 2019**BOTANY****[HONOURS]****Course Code : BOT(H)CC-05-T****(Diversity of Bryophytes and Pteridophytes)**

Full Marks : 40

Time : $2\frac{1}{2}$ 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.***Answer all the questions.**1. Answer any **five** of the following questions : $2 \times 5 = 10$

- a) Write the systematic position of *Anthoceros* and mention one monoecious species of it.
- b) Define epicranoid peristome teeth and mention one example.
- c) Distinguish involucre from columella.
- d) Write any two economic importance of *Sphagnum*.
- e) Define apospory in bryophytes and mention an example.

[Turn over]

- f) Name a pteridophyte having agricultural uses. Mention one application of it in agriculture.
- g) Write the morphological nature of 'trabeculae' in *Selaginella*.
- h) Write an example of a terrestrial heterosporous fern. Define synangium.

2. Answer any two of the following questions :

5×2=10

- a) Write short note on homologous theory of alternation of generation. 5
- b) Describe the spore dispersal mechanism in *Funaria*. 5
- c) What is incipient heterospory? Write about the role of heterospory in developing seed habit. 1+4
- d) Discuss the stellar structure of *Lycopodium* with labelled sketches. 5

3. Answer any two of the following questions :

10×2=20

- a) Discuss the progressive evolution of sporophyte in Bryophyte with examples and suitable diagrams. Write the names of any two Indian species of Bryophyte bearing 'gemma cup'.

8+2

- b) Write about the modern concepts in Bryophyte classification following Shaw and Goffinet (2000). Why are Bryophytes called amphibian plants? 8+2
- c) Schematically describe the telome concept. Describe briefly about *Rhynia* and *Cooksonia*. 5+5
- d) Give an illustrative account of structure and development of *Marsilea* sporocarp. What is circinate vernation? Where do you find it? Name the geological time period when pteridophyte originated. 7+1+1+1
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