# U.G. 3rd Semester Examination - 2020

## BOTANY

### [HONOURS]

### Course Code : BOT-H-CC-T-05

### (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.*

1. Answer any **five** of the following questions : 2×5=10

   a) Distinguish between *involucre* and *columella*.

   b) Write any four (two vegetative and two reproductive) adaptive features of Bryophytes for land plants.

   c) Mention the systematic position of *Riccia*.

   d) What is *pseudoelater*? Where do you find it?

   e) Distinguish between apospory and apogamy.

   f) What is heterospory? Write an example of heterosporous Pteridophyte.

   g) Write any two hydrophytic characters of *Marsilea*.

   h) What are *trabeculae*? Where do you find them?



2. Answer any **two** of the following questions: 5×2=10

   a) Describe the male reproductive structure of *Marchantia* with proper drawing and labelling.

   b) Write briefly the origin of alternation of generation emphasizing the homologous theory.

   c) Describe with sketches the diversity of stellar structures of *Lycopodium*.

   d) Write down the economic importance of Pteridophytes.

3. Answer any **two** of the following questions: 10×2=20

   a) Describe with sketches the evolution of sporophytes, mentioning both progressive and regressive concepts. 10

   b) Name the symbiotic alga associated with *Anthoceros*. Mention its location. Describe with sketches the sexual reproduction of *Anthoceros*. 1+1+8=10

   c) Write the structural features of *Rhynia*. Briefly describe the telome theory. 5+5=10

   d) Describe with sketches the external morphology of *Ophioglossum* and internal structure of internode of *Equisetum*. 5+5=10

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