

**B.Sc. 1st Semester (Honours) Examination, 2017 (CBCS)**

**Subject : Botany**

**Paper : CC-II (Theory)**

**Time: 2 Hours**

**Full Marks: 40**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

*Answer all questions.*

1. Answer *any five* questions from the following: 2×5=10
    - (a) What is gemma? What is the function of it? 1+1=2
    - (b) What is the difference between protonema and gametophore?
    - (c) What is heterospory? Where it is found? 1+1=2
    - (d) What do you mean by leptosporangiate and eusporangiate fern? 1+1=2
    - (e) What do you mean by pycnoxylic wood? Cite an example. 1+1=2
    - (f) Differentiate between seed and ovule.
    - (g) Name a gymnospermic plant where female cone is not formed. Mention two fern characters of the taxon. 1+1=2
    - (h) Name one aquatic and one epiphytic gymnosperm. 1+1=2
  2. Answer *any two* questions from the following: 5×2=10
    - (a) Compare the sporophytes of *Pellia* and *Marchantia* with suitable diagrams. 3+2=5
    - (b) Write down the different types of steles found in *Lycopodium* with suitable diagram and example. 3+2=5
    - (c) What is coralloid root? What is trabeculae? Write the morphological nature of rhizophore of *Selaginella*. 1+1+3=5
    - (d) Describe female cone of *Pinus* with suitable diagram. 3+2=5
  3. Answer *any two* questions from the following: 10×2=20
    - (a) Draw and describe the sporophyte of *Anthoceros*. Mention its evolutionary significance. 4+4+2=10
    - (b) What is Telome? Who proposed the 'Telome Theory'? Illustrate the evolution of Pteridophyta in accordance with the 'Telome Theory' with diagram. 1+1+8=10
    - (c) Name one pteridophyta where amphiphloic siphonostele is found. Name the spore bearing structure of that Pteridophyte. Discuss the morphological nature of that structure with proper diagram. 1+1+4+4=10
    - (d) Describe the male and female strobilus of *Gnetum* with suitable labelled sketches. Write two angiospermic features of this genus. 4+4+2=10
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