

B.Sc. (Honours) Examination, 2017
Semester – IV
Botany
Course: BBC-41 (Core)
(Pteridophytes, Gymnosperms & Palaeobotany)

Time – 3 Hours

Full Marks : 40

Questions are of value as indicated in the margin.

Answer question **No.1** and any **two** each from **Group-A** and **Group-B**

1. Briefly define **any eight** of the following: 1x8=8
- a) Exosporic embryo
 - b) Endosporic gametophyte
 - c) Microphyll
 - d) Rhynie chart bed
 - e) Bars of Sanio
 - f) Coralloid roots
 - g) Pycnoxylic wood
 - h) Pollen and spores
 - i) Coenosorus
 - j) Sporopollenin
 - k) Index fossil
 - l) Tent pole

Group-A
(Pteridophytes)

2. Describe with illustration the various stellar organisations and gametophytes in *Lycopodium* sensu lato. 4+4=8
3. Distinguish the sub-genera of *Calamites*. Schematically represent the distribution pattern of vascular traces in nodal and internodal regions in *Equisetum*. 4+4 = 8
4. Write short notes on **any two** of the following: 4x2=8
- a) Rhizophore of *Selaginella*
 - b) Origin of megaphyll as per Telome concept
 - c) Sporangiferous spike of *Ophioglossum*

Group-B
(Gymnosperms & Palaeobotany)

5. Give the scientific name and distribution pattern of chilgoza pine and blue pine in India. Give a detailed account of development of proembryo in *Pinus*. 4+4=8
6. Define fossil. What is the starting point of fossil plant nomenclature? What is coalified compression? Write in brief the principle of radiocarbon dating used to decipher the age of fossil plants. 1+1+2+4=8
7. Write short notes on **any two** of the following: 4x2=8
- a) Sporoderm stratification
 - b) NPC classification of pollens
 - c) Indian Gondwana stratigraphy
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