

B. Sc. (Honours) Examination, 2019
Semester – II (CBCS)
Botany
Paper: CC –4
(Archegoniate)

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, Group – Band Group-C**

1. Answer **any ten** of the following: 1×10=10
- a) Why are sporophytes of bryophytes called matromorphic?
 - b) Write the scientific name of a leafy liverwort.
 - c) What is succubous type of leaf arrangement?
 - d) Mention the organ genera of Williamsoniaceae.
 - e) What is manoxylic wood?
 - f) What is '*Bars of Sanio*'?
 - g) What is foliar spur?
 - h) Write the scientific name of 'Blue Pine'.
 - i) What is peat moss?
 - j) What is 'sclerotic nests'? Where is it found?
 - k) Cite one difference between radiospermic and platyspermic seed.
 - l) What is derived fossil?
 - m) Mention one xerophytic and one hydrophytic character of *Equisetum*.
 - n) What is telome?
 - o) Give two examples of water fern.

Group – A
(Bryophytes)

2. Give a detail account of classification of bryophytes upto classes. 5
3. Write down the characteristic features of mature sporophytes of *Anthoceros*. What are the evolutionary tendencies exhibited by the sporophyte? 3+2=5
4. Write down the distinguishing features between the class Sphagnopsida and Bryopsida. Describe the *theca* or *urn* region of capsule of *Funaria*. 2+3=5

Group- B
(Pteridophytes)

5. Mention two adaptive features of land habit. Briefly describe the probable causes of extinction of *Calamites*. Name two heterosporous member of Calamitaceae. What is the geological distribution of *Calamites*? 1+2+1+1=5
6. Cite two peculiar characters of *Ophioglossum*. Mention two fern characters of the genus. Comment on the morphological nature of rhizophore in *Selaginella* briefly. 1+1+3=5

P.T.O.

(2)

7. Write short notes on the following: 2½×2=5
- a) Origin of megaphylls in reference to Telome theory
 - b) Evolutionary events to achieve seed habit

Group-C
(Gymnosperms & Palaeobotany)

8. Give an account of structure of male cone of *Cycas* with suitable diagram. 5
9. Mention two distinguishing characters of Cordaitales. Briefly explain the origin of seed cone complex with reference to Cordaitales. 1+4=5
10. Write short notes on the following: 2½×2=5
- a. *Lyginopterisoldhamia*
 - b. Geological time scale
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