

2019

BOTANY — HONOURS

Paper : CC-4

Full Marks : 50

The figures in the margin indicate full marks.

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

1. Answer **any five** questions : 2×5
- (a) What is epicranoid peristome teeth? Give an example.
 - (b) Distinguish between pseudoelater and elater.
 - (c) What is glossopodium? Mention its function.
 - (d) Name a pteridophyte used in agriculture stating its use.
 - (e) Distinguish between microphyll and megaphyll.
 - (f) Mention any two fern characters of *Cycas*.
 - (g) What is shoot dimorphism? Give an example.
 - (h) What is sulphur shower?
2. Answer **any two** of the following in brief :
- (a) State the role of bryophytes in monitoring pollution. 5
 - (b) Define incipient heterospory. Mention the role of heterospory in developing the seed habit. 1+4
 - (c) Mention two diagnostic characters of Progymnosperms. Comment on the phylogenetic importance of *Archaeopteris*. 2+3
3. Write a brief note on the algal origin of bryophytes. Briefly discuss the progressive concept of sporophyte evolution in bryophytes. 5+5

Or,

Comment on the following :

- (a) Vegetative reproduction in bryophytes
 - (b) Spore dispersal in *Funaria*. 5+5
4. Define the different elementary processes associated with the Telome concept. Explain how the origin of reproductive structures in Lycophyta and Filicophyta could be explained with the help of Telome concept. 4+3+3

Please Turn Over

Or,

Write the following :

- (a) State the morphological nature of synangium in *Psilotum*. 5+5
 - (b) Briefly describe the soral morphology and anatomy in *Pteris* with suitable diagrams. 3+3+4
5. Distinguish between the wood anatomical features of *cycas* and *Pinus*. State the geographical distribution of *cycas* species in India. Add a note on the economic importance of gymnosperms with reference to wood and essential oil. 3+3+4

Or,

Compare the embryogeny of *cycas* and *Pinus* with suitable diagrams. Add a note on the angiospermic characters of *Gnetum*. 7+3
