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2 SEM TDC BOTH (CBCS) C 4

2026

(May/June)

BOTANY

(Core)

Paper : C-4

(Archegoniate)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Choose the correct answer : 1×5=5

(a) Spore-bearing organ 'sporocarp' is found in *Selaginella* / *Marsilea* / *Ophioglossum*.

(b) Reticulate venation is found in the leaves of *Ginkgo* / *Cycas* / *Gnetum*.

(c) Pollination in gymnosperm is exclusively done by insects / water / air.

(2)

- (d) The sporophyte of *Riccia* is composed of only foot / only seta / only capsule.
- (e) Rhizophores are present in *Lycopodium* / *Selaginella* / *Equisetum*.

2. Write short notes on any three of the following : $4 \times 3 = 12$

- (a) Capsule of polytrichum
- (b) Primitive character of *Equisetum*
- (c) Adaptive characters of archegoniate to survive on land
- (d) 'Tentpole' of *Ginkgo*

3. With suitable sketches, describe the evolution of sporophytes in bryophytes. Which one is most primitive according to your opinion? $3+7+2=12$

Or

With suitable diagrams, compare the external and internal structure of gametophyte of *Riccia* and *Marchantia*. $4+8=12$

4. Give a comparative account of the spore-bearing structures of *Selaginella*, *Equisetum* and *Ophioglossum* with sketches. $9+3=12$

(3)

Or

Distinguish between homosporous and heterosporous. Describe the heterosporous nature of *Selaginella* with suitable diagram. Mention the significance of heterosporous in seed habit. $2+7+3=12$

5. Write explanatory notes on any two of the following : $6 \times 2 = 12$

- (a) Theory of fossilization
- (b) Heterophylly in *Sphenophyllum*
- (c) Ecological and economic importance of gymnosperms
- (d) Angiospermic characters of *Gnetum*
