2019

BOTANY

(Major)

Paper : 1.2

(Bryophytes and Pteridophytes)

Full Marks : 60

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Choose and write the correct answer : 1×7=7

(a) The development of sporophyte from gametophyte without gamete formation is called

(i) apogamy
(ii) apospory
(iii) heterospory
(iv) parthenogenesis

(b) Pseudoelaters without thickening bands occur in

(i) *Marchantia*
(ii) *Anthoceros*
(iii) *Porella*
(iv) *Riccia*

(c) Which of the following is used as packing material?

(i) *Polytrichum*

(ii) *Funaria*

(iii) *Sphagnum*

(iv) *Pogonatum*

(d) Trabeculae are seen in the sporogonium of

(i) *Funaria*

(ii) *Polytrichum*

(iii) *Sphagnum*

(iv) *Marchantia*

(e) Which of the following is 'club moss'?

(i) *Equisetum*

(ii) *Selaginella*

(iii) *Lycopodium*

(iv) *Rhynia*

(f) The gametophyte of *Psilotum* is

(i) exosporic

(ii) endosporic

(iii) dioecious

(iv) endoscopic

(g) Amphiphloic siphonostele is present in the rhizome of

(i) *Pteris*

(ii) *Marsilea*

(iii) *Gleichenia*

(iv) *Thymenophyllum*

2. Distinguish between the following : 2×4=8

(a) Leptosporangiate and Eusporangiate

(b) Apospory and Apogamy

(c) Prothallus and Protocorm

(d) Antheridium and Archegonium

3. Answer any *three* of the following questions : 5×3=15

(a) Describe the *Endothecium* in bryophytes.

(b) Describe the anatomical peculiarites of the rhizome of *Polytrichum*.

(c) Compare and contrast between Bryophytes and Pteridophytes.

(d) Describe the primitive characteristics of sporophyte of *Riccia*.

(e) Describe morphological nature of rhizophore in *Selaginella*.

4. Answer the following questions : 10×3=30

(a) Describe in detail about the morphological structure and reproduction of *Marchantia*.

Or

Describe the phylogenetic significance of *Anthoceros*.

(b) What is alternation of generations? Describe it in relation to *Psilotum* with the help of suitable diagrams.

Or

Write an illustrated account of the different types of gametophytes found in *Lycopodium*.

(c) What is heterospory? Describe in detail about the origin and evolution of heterospory of seed habit.

Or

Write about the progressive sterilization of the sporogenous tissue.

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