

Total number of printed pages-4

3 (Sem-1) BOT M2

2021

(Held in 2022)

**BOTANY**

(Major)

Paper : 1·2

**(Bryophytes and Pteridophytes)**

Full Marks : 60

Time : Three hours

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

1. Choose and write the correct answer :

1×7=7

(a) Sphagnum is commonly known as

(i) reindeer moss

(ii) cow moss

(iii) common moss

(iv) peat moss

Contd.

(b) In the life cycle of moss, which of the following generations is dominant ?

- (i) Haploid gametophyte
- (ii) Diploid gametophyte
- (iii) Haploid sporophyte
- (iv) Diploid sporophyte

(c) The phenomenon where two types of spores differing in size, structure and function are formed on the same plant is known as

- (i) homosporous
- (ii) heterosporous
- (iii) aposporous
- (iv) apogamous

(d) Development of sporophyte from the gametophytic tissue without involving fusion of gametes is known as

- (i) aposporous
- (ii) apogamous
- (iii) parthenogenesis
- (iv) telome

(e) The spore producing organs in Psilotum are called

- (i) sporophyll
- (ii) indusium
- (iii) cone
- (iv) synangium

(f) The thallus of Riccia is

- (i) filamentous
- (ii) dorsiventral
- (iii) erect
- (iv) climber

(g) Which of the following steles is considered to be the most primitive ?

- (i) Haplostele
- (ii) Plectostele
- (iii) Solenostele
- (iv) Dictyostele

2. Distinguish between the following :

2×4=8

- (a) Antheridiophore and Archegoniophore
- (b) Tuberculate rhizoid and Smooth-walled rhizoid
- (c) Rhizophore and Roots
- (d) Protostele and Siphonostele

3. Write notes on **any three** of the following :

5×3=15

- (a) Advanced features of sporophyte of Anthoceros
- (b) Sporocarp of Marsilea

- (c) Economic importance of Bryophyta
- (d) Morphological nature of rhizophore of Selaginella
- (e) Stellar system in Lycopodium

4. Answer the following questions :  $10 \times 3 = 30$

- (a) Describe the evolution of sporophyte by progressive sterilization of potential sporogenous tissue in bryophytes.

**Or**

Give a general account on various methods of spore dispersal in bryophytes.

- (b) Write an account on heterospory and seed habit in pteridophytes.

**Or**

What is stele ? Describe various stellar systems found in Pteridophytes with suitable diagram.

- (c) Write an account on habit and habitat of Sphagnum. Describe its spore dispersal mechanism.  $5+5=10$

**Or**

“Psilotum is a living fossil.” Justify the statement. 10