

**2 0 2 2**

( CBCS )

( 5th Semester )

**BOTANY**

SIXTH PAPER

**( Algae, Lichens, Bryophytes )**

*Full Marks : 75*

*Time : 3 hours*

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

**( SECTION : A—OBJECTIVE )**

( Marks : 10 )

Tick (✓) the correct answer in the brackets provided :

1×10=10

1. The storage product of green algae is

- (a) leucosin and chrysolaminarin ( )
- (b) starch and fat ( )
- (c) cyanophycean starch ( )
- (d) floridean starch ( )

2. Heterokontae is the chief characteristic feature of

- (a) Cyanophyceae ( )
- (b) Chlorophyceae ( )
- (c) Xanthophyceae ( )
- (d) brown algae ( )

3. Isomorphic alternation of generation can be observed in

- (a) *Laminaria* ( )
- (b) *Ectocarpus* ( )
- (c) *Chlamydomonas* ( )
- (d) *Nostoc* ( )

4. Antibiotic chlorellin is obtained from the member of
- (a) Phaeophyceae ( )
  - (b) Xanthophyceae ( )
  - (c) Bacillariophyceae ( )
  - (d) Chlorophyceae ( )
5. *Usnea* sp. and *Cladonia* sp. reproduce vegetatively by means of
- (a) Pycnidia ( )
  - (b) Soredia ( )
  - (c) Perithecia ( )
  - (d) Fragmentation ( )
6. Lichens are the best indicators of
- (a) soil pollution ( )
  - (b) water pollution ( )
  - (c) air pollution ( )
  - (d) all types of pollution ( )
7. In Smith system of classification, the class Hepaticae (Hepaticopsida) is divided into
- (a) three orders ( )
  - (b) two orders ( )
  - (c) five orders ( )
  - (d) four orders ( )
8. A characteristic feature of bryophytes is
- (a) a dominant and parasitic sporophyte ( )
  - (b) a dominant and spore-producing gametophyte ( )
  - (c) short lived sporophyte phase, which is dependent on gametophyte ( )
  - (d) sporophytes stay for a longer duration ( )
9. Archegonium is
- (a) club-shaped ( )
  - (b) elongated ( )
  - (c) flask-shaped ( )
  - (d) tube-like ( )

10. Elaters help in
- (a) water absorption ( )
  - (b) spore dispersal ( )
  - (c) anchorage ( )
  - (d) All of the above ( )

( SECTION : B—SHORT ANSWER )

( Marks : 15 )

Write notes on the following in brief :

3×5=15

UNIT—I

1. Accessory pigments in algae

**OR**

2. Hypnospores and hypnozygotes

UNIT—II

3. Zoospore formation in Phaeophyceae

**OR**

4. Triphasic life cycle in algae

UNIT—III

5. Crustose lichens

**OR**

6. Foliose lichens

UNIT—IV

7. Thallus structure of *Riccia*

**OR**

8. Protonema stage of Bryopsida

UNIT—V

9. Theory of sterilization

**OR**

10. Pseudopodium

( SECTION : C—DESCRIPTIVE )

( Marks : 50 )

Answer the following questions :

10×5=50

UNIT—I

1. Write an account of Fritsch's system of classification of algae. 10

**OR**

2. Write short notes on the following : 5+5=10  
(a) Types of flagella found in algae  
(b) Characteristics of Cyanophyceae

UNIT—II

3. Discuss the economic importance of algae. 10

**OR**

4. Write short notes on the following : 5+5=10  
(a) Types of reproduction in Rhodophyceae  
(b) Alternation of generation in algae

UNIT—III

5. What are lichens? Describe their economic importance. 2+8=10

**OR**

6. Write short notes on the following : 5+5=10  
(a) General characteristics of lichens  
(b) Vegetative reproduction in lichens

UNIT—IV

7. Describe the characters of bryophytes and give an outline of their classification. 10

**OR**

8. Write short notes on the following : 5+5=10  
(a) Morphology of *Sphagnum*  
(b) Peristome of *Polytrichum*

UNIT—V

9. Describe the various views on the origin of Bryophyta. 10

**OR**

10. Write short notes on the following : 5+5=10  
(a) Archegonia of *Pellia*  
(b) Antheridia of *Riccia*

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