

2015

(5th Semester)

BOTANY

SIXTH PAPER

(Algae, Lichens, Bryophytes)

Full Marks : 55

Time : 2½ hours

(PART : B—DESCRIPTIVE)

(Marks : 35)

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

1. Give an outline of Fritsch's system of classification of algae. 7

Or

Write a brief note on the characteristic features of major classes of algae.

2. Give an account of the mode of reproduction in chlorophyceae. 7

Or

Discuss the economic importance of algae.

G16/149a

(Turn Over)

3. Describe the distribution and general characteristic features of lichens. 7

Or

Give an account of the economic importance of lichens.

4. What are bryophytes? Write a note on the general features of bryophytes with suitable examples. 2+5=7

Or

Write a comparative account on the structure of sex organs in *Riccia* and *Polytrichum*. 7

5. Write an essay on progressive evolution of sporophytes in bryophytes. 7

Or

Write accounts on the following : $3\frac{1}{2} \times 2 = 7$

(a) Bryophytes as indicator of pollution

(b) Fossil bryophytes

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(PART : A—OBJECTIVE)

(Marks : 20)

The figures in the margin indicate full marks for the questions

SECTION—A

(Marks : 5)

Put a Tick (✓) mark against the correct answer in the brackets provided : 1×5=5

1. *Polysiphonia* exhibits

- (a) diplontic life cycle ()
- (b) diplohaplontic life cycle ()
- (c) haplobiontic life cycle ()
- (d) diplobiontic life cycle ()

2. Whiplash flagella are

- (a) smooth surfaced ()
- (b) feathery ()
- (c) flagellum with a terminal fibril ()
- (d) None of the above ()

3. In *Riccia*, the sporophyte

- (a) is divisible into foot, seta and capsule ()
- (b) is divisible into foot and capsule ()
- (c) does not contain foot and seta ()
- (d) the capsule is absent ()

4. Theory of progressive evolution of sporophytes in bryophytes was advocated by

- (a) Evans (1939) ()
- (b) Goebel (1930) ()
- (c) Bower (1908-35) ()
- (d) Kashyap (1919) ()

5. Lichens growing on soil are grouped as

(a) corticoles ()

(b) saxicoles ()

(c) terricoles ()

(d) None of the above ()

(4)

SECTION—B

(Marks : 15)

Write notes on the following :

1. Akinetes

2. Isomorphic alternation of generation

- (a) corticoles
- (b) saxicoles
- (c) terricoles
- (d) None of the above

3. Crustose lichen

Write notes on the following :

3-5-15

1. Akinetes

4. Protonema

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B. Apophysis

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(PART A - OBJECTIVE)

(Marks: 20)

The figures in the margin indicate full marks for the questions

SECTION - A

(Marks: 5)

Put a Tick (✓) mark against the correct answer in the
bracket provided. (1-5-5)

1. *Chara* exhibits

(a) diplontic life cycle []

(b) diplohaplontic life cycle []

(c) haplobiontic life cycle []

(d) diplobiontic life cycle []

5. Apophysis

(a) papillate surface ()

(b) warty ()

(c) flagellum with a terminal bulb ()

(d) None of the above ()

6. In *Nicotiana*, the sporophyte

(a) is divisible into foot, stem and capsule ()

(b) is divisible into foot and stem ()

(c) does not contain foot and stem ()

(d) the capsule is absent ()

7. Theory of progressive evolution of sporophytes in bryophytes was advocated by

(a) Ewan (1934) ()

(b) Goebel (1900) ()

(c) Sauer (1908-35) ()

(d) Kashyap (1978) *** ()