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(NEP—2020)

(1st Semester)

BOTANY (MAJOR)

(Phycology and Mycology)

(Revised)

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. Prokaryotic cell organization is found in

- (a) Chlorophyceae () (b) Rhodophyceae ()
(c) Cyanophyceae () (d) Phaeophyceae ()

2. The life cycle of *Polysiphonia* is best described as

- (a) haplontic () (b) diplontic ()
(c) diplohaplontic () (d) triphasic ()

3. Isomorphic type of alternation of generation is found in

- (a) *Ectocarpus* () (b) *Chara* ()
(c) *Polysiphonia* () (d) *Nostoc* ()

4. The reserved food product of Rhodophyceae is
 (a) leucosin () (b) laminarin ()
 (c) chrysolaminarin () (d) floridean starch ()
5. Brown algae are characterized by the presence of
 (a) carotene () (b) fucoxanthin ()
 (c) phycoerythrin () (d) chlorophyll e ()
6. The fungi in Mastigomycotina are commonly called as
 (a) sac fungi () (b) false fungi ()
 (c) zoosporic fungi () (d) club fungi ()
7. Clamp connections are characteristics of
 (a) Ascomycotina () (b) Basidiomycotina ()
 (c) Mastigomycotina () (d) Deuteromycotina ()
8. The fusion of two compatible haploid mycelia to form a dikaryotic mycelium is called
 (a) fragmentation () (b) karyogamy ()
 (c) meiosis () (d) plasmogamy ()
9. Mycorrhizae are symbiotic association between
 (a) plant root and algae ()
 (b) plant root and fungi ()
 (c) plant root and bacteria ()
 (d) plant root and *Cycas* ()
10. Crustose lichens have
 (a) erect thallus () (b) shrubby thallus ()
 (c) flattened thallus () (d) leafy thallus ()

(SECTION : B—SHORT ANSWERS)

(Marks : 15)

Write short notes on *five* of the following taking at least *one* from each Unit : 3×5=15

UNIT—I

1. Heterocyst
2. Economic importance of algae

UNIT—II

3. General characteristics of Phaeophyceae
4. Globule of *Chara*

UNIT—III

5. General features of fungi
6. Fruiting body of *Agaricus*

UNIT—IV

7. Vesicular-arbuscular mycorrhizae (VAM)
8. Economic importance of Lichen

(SECTION : C—DESCRIPTIVE)

(Marks : 50)

Answer *five* questions, taking at least *one* from each Unit :

10×5=50

UNIT—I

1. Write the Fritsch system of classification of Algae. 10
2. Write short notes on the following : 5+5=10
 - (a) Haplontic life cycle
 - (b) Cell structure of *Nostoc*

UNIT—II

3. Describe with labelled diagram the reproduction and life cycle of *Ectocarpus*. 10
4. Write short notes on the following : 5+5=10
- (a) Asexual reproduction in *Polysiphonia*
 - (b) General characteristics of Chlorophyceae

UNIT—III

5. Write the classification of fungi by Ainsworth system. 10
6. Write short notes on the following : 5+5=10
- (a) General characteristics of Basidiomycota
 - (b) Sexual reproduction in *Rhizopus*

UNIT—IV

7. Describe the types and reproduction in Lichens. 10
8. Write short notes on the following : 5+5=10
- (a) General characteristics of mycorrhizae
 - (b) Economic importance of fungi
