2023

(NEP—2020)

(1st Semester)

BOTANY (MAJOR)

(Phycology and Mycology)

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. *Spirulina* belongs to the class

(a) Chlorophyceae ( )

(b) Rhodophyceae ( )

(c) Phaeophyceae ( )

(d) Cyanobacteria ( )

2. Prokaryotic cells are present in

(a) Cyanobacteria ( )

(b) Rhodophyceae ( )

(c) Phaeophyceae ( )

(d) Chlorophyceae ( )

3. In *Ectocarpus*, the gametangia are

(a) plurilocular ( )

(b) unilocular ( )

(c) nucule ( )

(d) monosporangia ( )

4. Phaeophyta is also known as
   (a) red algae ( )
   (b) green algae ( )
   (c) blue-green algae ( )
   (d) brown algae ( )

5. Algae having a multinucleate thallus without septation are
   (a) siphonaceous ( )
   (b) parenchymatous ( )
   (c) pseudoparenchymatous ( )
   (d) coccoid ( )

6. Club fungi belongs to
   (a) Ascomycotina ( )
   (b) Deuteromycotina ( )
   (c) Basidiomycotina ( )
   (d) Mastigomycotina ( )

7. The fruiting bodies of *Agaricus* is known as
   (a) Basidiocarp ( )
   (b) Ascocarp ( )
   (c) Fairy rings ( )
   (d) Cleisthothecium ( )

8. Imperfect fungi which lack sexual reproduction belongs to
   (a) Basidiomycotina ( )
   (b) Deuteromycotina ( )
   (c) Ascomycotina ( )
   (d) Mastigomycotina ( )

9. The ectomycorrhiza formed an intercellular network in the root cortex known as
   (a) hartig net ( )
   (b) vesicles ( )
   (c) arbuscules ( )
   (d) haustoria ( )

10. The symbiotic association between algae and fungi is known as

(a) mycorrhiza ( )

(b) lichens ( )

(c) parasitism ( )

(d) mutualism ( )

(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. Algal bioprospecting

2. Cell structure of *Spirulina*

UNIT—II

3. Carpogonium of *Polysiphonia*

4. General characteristics of Chlorophyta

UNIT—III

5. Plasmogamy in *Agaricus*

6. General characteristics of Ascomycotina

UNIT—IV

7. Economic importance of fungi

8. Distribution of lichens

(SECTION : C—DESCRIPTIVE)

(*Marks* : 50)

Answer *five* of the following questions taking at least *one* from each unit : 10×5=50

UNIT—I

1. Describe the reproduction and life cycle of *Nostoc* with suitable diagrams. 10

2. Write notes on : 5+5=10

(a) Merits and demerits of Fritsch's classification of algae

(b) Algal thallus organisation

UNIT—II

3. Describe the reproduction and life cycle of *Chara* with suitable diagrams. 10

4. Write notes on : 5+5=10

(a) Economic importance of algae

(b) General characteristics of Rhodophyta

UNIT—III

5. Describe with labelled diagram the reproduction and life history of *Alternaria.* 10

6. Write notes on : 5+5=10

(a) General features of fungi

(b) General characteristics of Mastigomycotina

UNIT—IV

7. Discuss the types and reproduction of mycorrhizal fungi. 10

8. Write notes on : 5+5=10

(a) Economic importance of lichens

(b) General characteristics of lichens

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