[This question paper contains 4 printed pages.]

Sr. No. of Question Paper : 7861 **F–2** **Your Roll No.....**

Unique Paper Code : 2531202

Name of the Course : **Bachelor with Honours in Microbiology** [DC–1.4]

Name of the Paper : Phycology and Mycology

Semester : II

Duration : 3 Hours Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **five** questions selecting at least **two** questions from each section.
3. **All** questions carry equal marks.

SECTION A
(Phycology)

1. (a) Define the following **(any seven)** :

   (i) Epiphytic Algae

   (ii) Pyrenoid

   (iii) Dioecious

   (iv) Anisokont

   (v) Coenobium

   (vi) Red Snow

   (vii) Zoospore

   (viii) Oogamy (1×7=7)

P.T.O.

(b) Draw well-labeled diagram of the following **(any two)** :

(i) Transverse section of a diatom

(ii) Akinete

(iii) Cyanophycean vegetative cell (3×2=6)

(c) Explain the significance of auxospores. (2)

2. Write short notes on the following **(any five)** :

(a) Heterocyst

(b) Characteristic features of Phaeophyceae

(c) Branching pattern in blue green algae

(d) Reserve food material in algal classes

(e) Economic importance of Rhodophyceae

(f) Sexual reproduction in *Chlamydomonas* (3×5=15)

3. (a) Differentiate between the following **(any four)** :

(i) Haplontic and Diplontic life cycle

(ii) Unilocular and Plurilocular sporangia

(iii) Pantonematic and Acronematic flagella

(iv) Siphonaceous and Heterotrichousthallus

(v) Isogamy and Oogamy (3×4=12)

(b) Give an example of the following **(any three)** :

(i) Parasitic Algae

(ii) Fresh water Red Alga

(iii) Agar producing algae

(iv) Kelp (1×3=3)

SECTION B
(Mycology)

4. (a) Define the following terms giving a suitable example **(any six)** :

(i) Holocarpic

(ii) Telomorph

(iii) Dolipore septum

(iv) Heteroecious fungus

(v) Coprophilous fungus

(vi) Chlamydospore

(vii) Diplanetism (2×6=12)

(b) Explain giving reasons why Neurospora used as a model organism in genetic studies ? (3)

5. Differentiate between **(any five)** :

(i) Biotroph and Necrotroph

(ii) Budding and Fission

(iii) Arthrospore and Chlamydospore

(iv) Cleistothecium and Perithecium

(v) Oospore and Oosphere

(vi) Haustoria and Appressorium (3×5=15)

6. (a) Write the classification and economic importance of the following **(any three)** :

(i) *Alternaria*

(ii) *Ustilago*

(iii) *Phytophthora*

(iv) *Cryptococcus neoformans* (2×3=6)

(b) What do you understand by the term heterothallism and who discovered it ? (2)

(c) Explain dimorphism with a suitable example. (2)

(d) Describe the various asexual fruiting bodies in fungi. (5)