

[This question paper contains 4 printed pages.]

Sr. No. of Question Paper : 1128

E

Your Roll No.....

Unique Paper Code : 253201

Name of the Course : B.Sc. (H) Microbiology

Name of the Paper : Phycology and Mycology [MIHT-203]

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 in all, selecting at least two questions from each Section.
3. All questions carry equal marks.

SECTION A (Phycology)

1. (a) Draw well labelled diagram/s of any one of the following :

(i) Nucule development in *Chara*

(ii) Daughter colony formation in *Volvox*

(4×1=4)

- (b) Define the following with a suitable example (any five) :

(i) Hormogonia

(ii) Heterotrichous thallus

(iii) Gongrosira stage

(iv) Raphe

(v) Fucosan vesicle

(vi) Aplanospore

(2×5=10)

P.T.O.

- (c) What is the food reserve in Rhodophyceae ? (1)
2. (a) Differentiate between the following (any two) :
- (i) Cystocarp and Spermocarp
 - (ii) Haplobiontic and Diplohaplontic life cycles
 - (iii) Unilocular and Plurilocular sporangia (4×2=8)
- (b) Give an example of the following (any five) :
- (i) Algal source of carageenan
 - (ii) Agarophytes
 - (iii) Causative agent of Red Rust of Tea
 - (iv) Thermal alga
 - (v) Antibiotic producer alga
 - (vi) Alga used as food (1×5=5)
- (c) Briefly comment on the applications of diatomite. (2×1=2)
3. (a) Draw well labelled diagram of any two of the following :
- (i) Girdle view of diatom
 - (ii) Akinete
 - (iii) Sex organs in *Vaucheria* (3×2=6)
- (b) Give the graphic (without diagrams) life history of *Polysiphonia*. (6×1=6)
- (c) Why are Cyanophyceae widely distributed ? (3×1=3)

SECTION B (Mycology)

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

(i) *Saprolegnia*

(ii) *Neocallimastix*

(iii) *Penicillium*

(iv) *Candida*

(3×3=9)

- (b) With the help of suitable diagrams, explain sexual reproduction in **any one** of the following genera :

(i) *Dictyostelium*

(ii) *Mucor*

(6×1=6)

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

(i) Holocarpic and Eucarpic

(ii) Spermatium and Microconidium

(iii) Cleistothecium and Perithecium

(iv) Budding and Fission

(v) Basidioles and Cystidia

(vi) Foliose and Fruticose lichens

(3×5=15)

6. (a) Define the following (**any six**) :

(i) Crozier

(ii) Anamorph

(iii) Dolipore septum

(iv) Sympodial branching

(v) Swarm cells

(vi) Diplanetism

(vii) Dictyospores

(1.5×6=9)

(b) Write short notes on **any two** :

(i) Role of fungi in environment.

(ii) Biodeterioration of wood and paper.

(iii) Industrially important fungi.

(3×2=6)