

**Bachelor of Science (B.Sc.) Semester—I (C.B.S.) Examination
(New & Old Course)**

**BOTANY
(Viruses, Prokaryotes and Algae)
Compulsory Paper—1
(New Course)**

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Illustrate your answers with suitable examples and diagrams wherever necessary.

1. Write notes on :—

- | | |
|--|---|
| (a) General characteristics of viruses | 5 |
| (b) Comparison between Archaeobacteria and Eubacteria. | 5 |

OR

Write short notes on :—

- | | |
|---|----|
| (c) Structure of <i>Mycoplasma</i> | 2½ |
| (d) Living nature of viruses | 2½ |
| (e) Structure of T ₄ Bacteriophage | 2½ |
| (f) Ultrastructure of TMV (Diagram only). | 2½ |

2. Write notes on :—

- | | |
|---|---|
| (a) Ultrastructure of cyanobacterial cell | 5 |
| (b) Economic importance of Bacteria. | 5 |

OR

Write short notes on :—

- | | |
|--|----|
| (c) Binary fission in Bacteria | 2½ |
| (d) Structure of Heterocyst | 2½ |
| (e) Flagella | 2½ |
| (f) Ultrastructure of Bacterial cell (Diagram only). | 2½ |

3. Write notes on :—

- | | |
|---------------------------------------|---|
| (a) Sex organs of <i>Chara</i> | 5 |
| (b) General characteristics of Algae. | 5 |

OR

Write short notes on :—

- (c) Thallus of *Oedogonium* 2½
- (d) Dwarf male in *Oedogonium* 2½
- (e) Thallus structure of *Chara* 2½
- (f) Vegetative reproduction in *Chara*. 2½

4. Write notes on :—

- (a) Economic importance of Algae 5
- (b) Sexual reproduction in *Ectocarpus*. 5

OR

Write short notes on :—

- (c) Sex organs of *Vaucheria* 2½
- (d) Plurilocular Sporangia 2½
- (e) Thallus of *Ectocarpus* 2½
- (f) Asexual reproduction in *Vaucheria*. 2½

5. Write in 2 of 3 lines only (any **TEN**). Diagrams are not necessary :—

- (a) Obligate parasite
- (b) Capsid
- (c) PPLO
- (d) Hormogonia
- (e) Sex pili
- (f) Akinete
- (g) Stipulode in *Chara*
- (h) Homothallic
- (i) Suffulactory cell
- (j) Coenocytic
- (k) Unilocular sporangia
- (l) Hapteron. 1×10

Bachelor of Science (B.Sc.) Semester—I (C.B.S.) Examination

BOTANY

(Viruses, Prokaryotes and Algae)

Compulsory Paper—1

(Old Course)

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Illustrate your answers with suitable examples and diagrams wherever necessary.

1. Write notes on :—

- | | |
|--|---|
| (a) Lysogenic cycle of T_4 Bacteriophage | 5 |
| (b) Living and non-living nature of viruses. | 5 |

OR

Write short notes on :—

- | | |
|--------------------------------------|----|
| (c) Structure of T_4 Bacteriophage | 2½ |
| (d) Structure of Mycoplasma | 2½ |
| (e) Economic importance of viruses | 2½ |
| (f) Structure of TMV. | 2½ |

2. Write notes on :—

- | | |
|--------------------------------------|---|
| (a) Ultrastructure of Bacterial cell | 5 |
| (b) Reproduction in <i>Nostoc</i> . | 5 |

OR

Write short notes on :—

- | | |
|--|----|
| (c) Conjugation in Bacteria | 2½ |
| (d) Economic importance of Cyanobacteria | 2½ |
| (e) Structure of Heterocyst | 2½ |
| (f) Useful aspects of bacteria. | 2½ |

3. Write notes on :—

- | | |
|--|---|
| (a) Structure of globule in <i>Chara</i> | 5 |
| (b) Economic importance of algae. | 5 |

OR

Write short notes on :—

- (c) Nucule of *Chara* 2½
- (d) Nannandrium 2½
- (e) Thallus structure in *Oedogonium* 2½
- (f) Asexual reproduction in *Oedogonium* 2½

4. Write notes on :—

- (a) Sexual reproduction in *Ectocarpus* 5
- (b) Sexual reproduction in *Vaucheria*. 5

OR

Write short notes on :—

- (c) Thallus structure of *Batrachospermum* 2½
- (d) Thallus of *Vaucheria* 2½
- (e) Chantransia stage 2½
- (f) Plurilocular sporangia. 2½

5. Write in 2 of 3 lines only (any **TEN**). Diagrams are not necessary :—

- (a) PPLO
- (b) Obligate parasite
- (c) Virion
- (d) Cocci
- (e) Pili
- (f) Cyanophycean granule
- (g) Reticulate chloroplast
- (h) Androspore
- (i) Corona
- (j) Unilocular sporangia
- (k) Synzoospore
- (l) Coenocytic. 1×10