

2019

B.Sc.

1st Semester Examination

BOTANY (Honours)

Paper - C 1-T

(Phycology and Microbiology)

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.
Illustrate the answers wherever necessary.*

1. Answer any *five* questions : 2×5=10
- (a) Define transduction in bacteria. Comment on its basic mechanism.
 - (b) What are passive diffusion and facilitated diffusion in microbial nutrition?
 - (c) Characterize the classes of viroids.
 - (d) What is heterocyst?

[Turn Over]

- (e) Mention two unique features of *Coleochaete*.
- (f) Name a coenocytic algae and comment on its reproduction.
- (g) What is oral vaccine? Give example.
- (h) Name a coenobium algae and characterize it morphologically.

2. Answer any *four* questions : 5×4=20

- (a) Give a brief account of the structure of T-phage.
- (b) Characterize mycoplasma. Write on their pathogenicity. 3+2
- (c) Write in detail about transformation mechanism of Gram-negative bacteria.
- (d) Highlight the prokaryotic characteristics of Cyanophycean algal members and describe the components and their arrangement inside the cell. 2+3
- (e) Describe the lysogenic cycle.
- (f) Comment on the evolutionary significance of *Prochloron* with reference to its features and possible related members.

3. Answer any *one* questions : 10×1=10

(a) What are prions? Briefly state the biochemical characteristics of prions responsible for its pathogenecity. Write a note on prion diseases of human beings. How can prions be decontaminated? 1+3+4+2

(b) Write a comprehensive note on the morphological features of *Chara*. Describe its reproduction. 5+5
