

Course name: B.SC (HONS) BOTANY
Semester: I
Unique Paper Code: 32161101
Paper: Microbiology and Phycology
Deptt Code 216
C. NO: C1

Time : 4 hrs (3hrs. for writing + 1 hr for downloading and uploading)

Max. Marks: 75

Write your University Roll number. Name of the Course, Semester, Paper title, Unique Paper Code, Name of the College, Email ID, Mobile number on first page of the answer sheet.

Attempt any four questions. Attempt all parts of a question together.

All questions carry equal marks (18.75).

Draw suitable well-labeled diagrams wherever required

Q.1 Discuss the role of algae in Industry, Environment Biotechnology and Agriculture.

Q.2 Describe the haplontic, diplontic, haplodiplontic and haplodiplobiontic of life cycles in algae. Give the diagrammatic representation of the life cycle of *Ectocarpus*.

Q.3 Describe the characteristic feature of archaeobacteria, eubacteria and wall-less forms (mycoplasma and spheroplasts). Give the diagrammatic representation of the structure of a bacterial cell.

Q.4 With suitable diagrams compare the morphology of *Volvox*, *Coleochaete* and *Vaucheria*. Explain the asexual reproduction of these three genera.

Q.5 Discuss the discovery, physiochemical and biological characteristics of viruses. Write the classification of viruses given by Baltimore.

Q.6 Write the characteristic features of Rhodophyceae. Explain the triphasic life cycle of *Polysiphonia* with the help of diagrams