

**Course name:** B.SC (HONS) BOTANY  
**Semester:** I  
**Unique Paper Code:** 32161101\_OC  
**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 mode of replication in viruses through lytic and lysogenic cycle with the help of diagrams. Compare between the two methods. Describe symptoms, causal organism and control measure of any one viral disease on plants.
- Q. 2 Draw the EM of a prokaryotic non-photosynthetic cell and explain its details. Discuss different methods of recombination observed in bacteria with the help of diagrams
- Q. 3 Discuss the criteria of classification of algae proposed by F.E. Fritsch and R.E. Lee. List the significant contributions of F.E. Fritsch, G.M. Smith, R.N. Singh, T.V. Desikachary, H.D. Kumar, M.O.P. Iyenger.
- Q. 4 Name the algal genus having triphasic life cycle. Discuss the triphasic life cycle with the help of labeled diagrams. Discuss the economic importance of Rhodophyceae.
- Q. 5 Discuss the range of thallus organization in members of chlorophyceae with the labeled diagrams. Name the genus associated with macrandrous and nannandrous forms and compare the two forms with the help of suitable diagrams.
- Q. 6 Discuss the role of viruses in vaccine production, medicines and diagnostics. Elaborate the role of bacteria and algae in the field of agriculture and industry.