

2022

BOTANY

[HONOURS]

(CBCS)

(First Semester)

PAPER-C1T

MICROBIOLOGY & PHYCOLOGY

Full Marks: 40**Time: 02Hrs***The figures in the right hand margin indicate marks**Candidates are required to give their answers in their own words as far as practicable*

- 1. Answer any FIVE of the following: 2x5**
- Name one epiphytic and epizoic species of *Ectocarpus* sp.
 - What are Gemini viruses?
 - Write down two characteristic features of mycoplasmas.
 - What is stone cell? Where it is found?
 - Define prophage.
 - What are chemolithotrophs? Give an example.
 - What is "Gaidukov phenomenon"?
 - What is meant by F⁻ bacterial cell?
- 2. Answer any FOUR of the following: 5x4**
- Write short notes on:
 - Classification of viruses as per Baltimore.
 - Detailed structure of T4-phage
 - What are prions? Classify bacteria on the basis of nutritional requirements.
 - Draw and describe the male sex organ of Chara.
 - Discuss the lytic cycle of viruses with suitable diagram.
 - Distinguish between carpogonium, carpo-sporangium and tetrasporangium of *Polysiphonia* sp.
 - State the role of algae in the biotechnology and industry.
- 3. Answer any ONE question: 10 x 1**
- Write a short note on conjugation. What are the different types of flagellar arrangements? Briefly describe the structure of gram (-) cell wall with suitable diagram.
 - What do you mean by isomorphic alternation of generation? Describe the asexual reproduction of *Ectocarpus* sp. Briefly describe the evolutionary significance of *Prochloron*.