

U.G. 1st Semester Examination - 2020**BOTANY****Course Code : BBOTCCHC 101****Course Title: Phycology and Microbiology**

Full Marks : 30

Time : 2 Hours

*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 **ten** questions from the following:

1×10=10

- What is photoheterotroph? Give an example.
- What is a prophage?
- Define Gongrosira stage.
- Name any siphonaceous alga and give its systematic position.
- What is trichogyne?
- What are amyllum stars?
- Define aplanospore.

- What is meant by trichothallic growth?
- Name a thermophilic bacterium.
- Define eclipse period.
- What do you mean by Carboxysomes?
- What is the fate of F'×F⁻ conjugation (mating)?
- What are the different pigments found in *Vaucheria* sp.?
- Name two nodule forming bacteria.
- Mention one major function of the viral-encoded glycoproteins.

2. Answer any **five** questions from the following:

2×5=10

- Define endospore with a labelled diagram.
- Briefly discuss about the two methods involved in induced/artificial transformation.
- Why alternation of generation in *Ectocarpus* is called isomorphic?
- Differentiate between Macrandrous and Nannandrous species of *Oedogonium*.
- Draw a labelled diagram of the lytic cycle of virus.

- f) Mention the role of virus in medicine and diagnostics.
- g) Write a short note on structure and morphology of antheridium of *Chara* sp.
- h) What is heterocyst? Where does it occur?

3. Answer any **two** questions from the following:

5×2=10

- a) Where Polysiphonia is found? Describe the post-fertilization changes of this alga. 1+4
- b) Discuss the role of bacteria in fermentation industries. 5
- c) How archeal cell wall differs from that of bacteria? Distinguish between Gram positive and Gram negative bacterial cell wall with labelled diagram. 1+4
