2022
B.A./B.Sc.
First Semester
CORE – 1
BOTANY
Course Code: BOC 1.11
(Phycology & Microbiology)

Total Mark: 70   Pass Mark: 28
Time: 3 hours

Answer <u>five</u> *questions, taking* <u>one</u> *from each unit.*

UNIT–I

1. Give an account on the theory of evolution as proposed by Charles Darwin. What are the main factors that determine the evolution of a species according to his theory?   14

2. Write short notes on the following: 7×2=14
   (a) Mechanism of speciation
   (b) Microbial growth and metabolism

UNIT–II

3. Describe the lytic and lysogenic cycles in virus with suitable diagram.   14

4. Write short notes on the following: 7×2=14
   (a) RNA and DNA virus
   (b) Viroids and prions

UNIT–III

5. Give an account on the different forms of bacteria with diagrams. Mention the differences between gram positive and negative bacteria.

        14

6. Write short notes on the following: 7×2=14
   (a) Bacterial genome and plasmids
   (b) Ultrastructure of a bacterial cell

UNIT–IV

7. What criteria have been adopted for classifying algae? Give the outline of Fritsch's system of classification of algae.   14

8. Write short notes on the following: 7×2=14
   (a) Cell structure of algae and its components
   (b) Economic importance of algae

UNIT–V

9. Explain the thallus organization in cyanobacteria. Write an account on the life cycle of *Nostoc*.   14

10. Write short notes on the following: 7×2=14
    (a) Reproduction in Rhodophyceae
    (b) Important features of life cycle of *Vaucheria*

———————————