2021
M.Sc.
First Semester
CORE – 01
BOTANY
Course Code: MBOC 1.11
(Microbiology & Algae)

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

Answer five *questions, taking* one *from each unit.*

UNIT–I

1. Write a note on classification of algae. List out the criteria for algal classification. 10+4=14
2. Describe the range of thallus organization in algae. 14

UNIT–II

3. Write a note on diversity of light harvesting pigments and food reserves in algae. 14
4. Explain the types of flagellar structures in algae with suitable diagrams. 14

UNIT–III

5. Write notes on the following: 7×2=14
   (i) Symbiotic algal association
   (ii) Algae as biological monitor of water pollution

6. Write notes on the following: 7×2=14
   (i) Techniques of culturing algae
   (ii) Economic importance of algae

UNIT–IV

7. (a) Describe one mechanism of gene transfer in bacteria with appropriate diagram. 6
   (b) What are the characteristics of an ideal chemotherapeutic agent? 4
   (c) Do all antibiotics qualify as chemotherapeutic agent? 4

8. (a) Describe microbial spoilage of foods. 4
   (b) Name five foods that are spoiled by micro-organisms along with the micro-organisms involved. 5
   (c) Differentiate between adaptive immunity and innate immunity. 5

UNIT–V

9. (a) The microbial degradation of some chemicals may lead to the production of more toxic and mobile intermediates than the parent compound. What are the various ways one tackle such a situation? 10
   (b) What are the various environmental factors that play a major role in the growth of micro-organisms? 4

10. (a) Give an account on the various types of mycorrhizal association. 8
    (b) Describe microbial succession using an appropriate example. 6

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