PG Even Semester Exam, May 2025

Microbiology

4th Semester

COURSE NO. MBCC- 652

[Microbial Diversity]

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer five questions, selecting one from each unit.

UNIT-I

1. Write an overview of the microbial world in details. 14
2. Describe microbial diversity in terms of morphology, physiology and genetics. 14

UNIT-II

3. What is meant by Polyphasic Taxonomy? What are its key components and why Polyphasic taxonomy is important? 4+5+5=14
4. In details discuss about- 7+7=14
   a. DNA-DNA hybridiyation (DDH)
   b. DNA-fingerprinting

UNIT-III

5. Differentiate between chemotrops, phototrops and diayotrops. Write the importance of sulphur bacteria sulphur cycle. 7+7=14
6. Give the importance of anoxic microbes in deep-sea environments. Also write a short note on methanogens. 9+5=14

UNIT-IV

7. Describe why 'Bergey's Manual of systemic Bacteriology is considered as a resource in microbial taxonomy. 14
8. In details discuss the various criteria adopted for bacterial classification and its organisation in Bergey's manual. 14

UNIT-V

9. In details discuss the fungal cell structures and its physiology. 14
10. Give a detailed account on importance of algal biotechnology and as biofuel production. 7+7=14

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