PG Even Semester Exam, 2024

Microbiology

4^{th} Semester

COURSE NO. MBCC- 651

[Soil & Environment Microbiology]

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 a detail note on different bacterial and fungal species commonly found in air. What are their adoptations to survive in atmospheric conditions? 10+4=14
2. Explain the various methods used for assessment of air quality. 14

UNIT-II

3. Write note on (any two) : 7+7=14
   i. Mutualism
   ii. Predation
   iii. Amensalism
   iv. Nod factors

Turn over

4. Explain the genetic attributes of nif- operon and also describe the role of nif-genes in the process of nitrogen fixation. 14

UNIT-III

5. What are the different types of microbe-based bio fertilizers? Explain the process of mass production of bio fertilizers. 7+7=14
6. What are bio polymers? Describe the production and use of bio polymers. 14

UNIT-IV

7. Explain the different types of freshwater ecosystems. Also describe the role of different microbes in freshwater ecosystem. 14
8. Describe the functions of different microorganisms that have important role in Nitrogen cycle. 14

UNIT-V

9. Write a detail note on solid waste management. How composting is used to convert waste materials into manure? 14
10. a. Explain the process of hydrocarbon degradation in detail. 7
    b. Write a short note on C-cycle. 7

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2024/SEM/EVEN/09/27/MIB-651/125

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