

B.Sc. Examination Nov-2014

Semester – III - Microbiology

Paper Name: 303 – Introduction to Environmental Microbiology

Paper code: 3793

Time: 2:30 Hours

Total Marks: 70

**Instructions: (a) Figure to the right indicates total marks of respective question.
(b) Draw neat, clean and labeled diagram wherever necessary.**

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| 1.(a) | Define extremophiles. Explain in detail on the classification of microorganisms on the basis of temperature. | 10 |
| 1.(b) | Write a note on barophiles. | 04 |

OR

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|--------------|---|-----------|
| 1.(a) | Write in brief on the effect of P^H on the growth of microorganisms. Describe acidophiles & alkalophiles. | 10 |
| 1.(b) | Define osmosis. Explain in brief on the effect of osmotic pressure on the growth of microorganisms. | 04 |

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| 2.(a) | What is mutualism? Explain in detail giving suitable examples. | 10 |
| 2.(b) | Write a note on commensalism. | 04 |

OR

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| 2.(a) | Define & enlist negative interactions. Explain predation & parasitism giving suitable examples. | 10 |
| 2.(b) | Write a note on endomycorrhiza. | 04 |

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| 3.(a) | Discuss in detail on the biodegradation of ABS & chlorinated hydrocarbons. | 10 |
| 3.(b) | Define bioremediation. Explain in brief on its need & scope. | 04 |

OR

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| 3.(a) | Describe the European system of traditional wastes & water treatment. | 10 |
| 3.(b) | Write a note on heavy metal pollution. | 04 |

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| 4.(a) | Write in detail on the organisms living in extreme environments. | 10 |
| 4.(b) | Write a note on axonic environment. | 04 |

OR

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|--------------|---|-----------|
| 4.(a) | Describe various plant-microbe interactions above ground level. | 10 |
| 4.(b) | Explain : Mycoparasitism | 04 |

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| 5.(a) | Describe the sources & pollutants of air. | 10 |
| 5.(b) | Write a note on biodegradation of Industrial wastes. | 04 |

OR

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|--------------|---|-----------|
| 5.(a) | Explain the distribution of microorganisms in nature. | 10 |
| 5.(b) | Write a note on Psychrophiles. | 04 |