

D 25848

Name.....

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION
SEPTEMBER/OCTOBER 2006

Microbiology

Paper **X—AGRICULTURAL MICROBIOLOGY**

Time : Three Hours

Maximum : 80 Marks

Section A

Answer any twenty questions.

Write briefly on :

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| 1. Amensalism. | 2. Phosphate Solubilization. |
| • 3. Denitrification. | 4. Rhizosphere effect. |
| 5. Ectomycorrhiza. | 6. Fungal pesticides. |
| 7. Heterocysts. | 8. Flavonoids. |
| 9. Lichens. | 10. Biological weapons. |
| 11. Superbug. | 12. Transgenic plants. |
| 13. Pectin degradation. | 14. Qualities of an ideal Microbial pesticide. |
| 15. Methods of application of pesticide. | 16. Integrated Pest Management (IPM). |
| 17. Enzootic infection. | 18. Mycotoxins. |
| 19. Methanogenesis. | 20. Vermiculture. |
| 21. Plant-pathogen interactions. | 22. Humus formation. |

(20 x 2 = 40 marks)

Section B

Answer any five questions.

Write notes on :

1. Associative and Antagonistic activities in the Rhizosphere.
2. Symbiotic Nitrogen fixation.
3. Mycorrhizal interactions and their beneficial effects.
4. Strategies for plant disease control.
5. Animal vaccines.
6. Biopesticides.
7. Use of phages in cowdung.

(5 x 8 = 40 marks)

D 26177

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THIRD SEMESTER M.Sc. DEGREE EXAMINATION
SEPTEMBER/OCTOBER 2006

Microbiology

Paper VIII—MOLECULAR BIOLOGY AND GENETIC ENGINEERING

Time : Three Hours

Maximum : 80 Marks

Answer the questions with needed diagrams.

Section A

*Answer all questions.
Each question carries 2 marks.*

Write very briefly on :

- | | |
|----------------------------------|---------------------------------------|
| 1. Structure of DNA. | 2. DNA topoisomerase. |
| 3. Universal genetic code. | 4. Poly A polymerase. |
| 5. T4 DNA ligase. | 6. Sigma factor. |
| 7. Generalised transduction. | 8. DNA labelling by Nick translation. |
| 9. Episomes. | 10. Retro elements. |
| 11. Replacement X phage vectors. | 12. PUC vectors. |
| 13. Express vectors. | 14. Cassette mutagenesis. |
| 15. Proto oncogenes. | 16. Gene augmentation therapy. |
| 17. Cycle sequencing. | 18. Telomers. |
| 19. Thermostable polymerases. | 20. Lytic cycle. |

(20 x 2 = 40 marks)

Section B

*Answer any five questions.
Each question carries 8 marks.*

Write notes on :

1. Experiment to prove semi-conservative replication of DNA.
2. Lac operon.
3. Compare natural and artificial transformation in *E.Coli*.
4. Transposon tagging.
5. Construction of genomic library.
6. Southern blotting.
7. Cointegrate and binary vectors systems.

(5 x 8 = 40 marks)