

**FOURTH SEMESTER M.Sc. DEGREE EXAMINATION
JUNE 2010**

Microbiology

MB4 IT – MICROBIAL BIOTECHNOLOGY

(2005 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A*Answer **all** the questions.**Each question carries **2** marks.*

Write briefly on :

1. VAM fungi.
2. Phosphatic biofertilisers.
3. Baker's yeast.
4. Xenobiotic pollutants.
- 5. PHB.**
6. Advantages of immobilized systems.
7. Probiotics.
8. Ti plasmid.
9. Heap leaching.
10. Hollow fibre systems for animal cell culture.
11. Biosurfactants.
12. Recombinant vaccines.
13. Microbial **desulphurization** of coal.
14. Cultural characteristics of **Rhizobium**.
15. Gene theory.
16. Edible vaccines.
17. Yeast products.
18. Single cell protein.
19. Microbial Enhanced Oil Recovery.
20. Hybridoma technology.

(20 x 2 = 40 marks)

Turn over

Section B

*Answer any **five** questions.*

Each question carries 8 marks.

Explain the following :

1. **Extremophiles** and their possible uses.
2. Microbial production of fuels.
3. Role of microbes in **xenobiotics** degradation.
4. Methods of immobilization of cells and enzymes.
5. Environmental impact of genetic engineering.
6. Microbial insecticides.
7. Production of microbial biofertilizers.

(5 x 8 = 40 marks)