

D 25850

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Name

Reg. No.....

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

Microbiology

Paper **XII—ADVANCED MICROBE BASED BIOTECHNOLOGIES**

Time Three Hours

Maximum 80 Marks

Section A

*Answer any twenty questions.
Each question carries 2 marks.*

1. **Biopolymers.**
2. **Lumac** system.
3. **PCR** based detection of food pathogens.
4. Recombinant Vaccines.
5. **Glycosilation** and **acetylation** of amino acids.
6. Elicitors in plant tissue culture.
7. **Bioreactors** for animal cell culture.
8. Enzymes used in **protoplast** isolation.
9. Vaccine farming.
10. **Bioactive** factors in milk.
11. **Biopulping.**
12. **Desulphurization.**
13. **Interferons.**
14. Green House Gases.
15. Rumen **microflora.**
16. Immobilization by encapsulation.
17. **Biosurfactants.**
18. Activated sludge system.
19. Microbial emulsifiers.
20. Microbe enhanced oil recovery.
21. ATP are based microbial cell **quantitation.**
22. Rotating biological contactor.

(20 x 2 = 40 marks)

Turn over

Section B

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

Write notes on :

1. Ammonia production by **Anabena**.
2. Microbe generated **Biofuels**.
3. **Applications of cell immobilization**.
4. **Protoplast culture and its applications**.
5. **Milk flavour manipulation through rumen microflora**.
6. **Biosensors**.
7. **Trickling filter system**.

(5 x 8 = **40** marks)