D 12977

Name .....

Reg. No .....

THIRD SEMESTER M.Sc. (MICROBIOLOGY) DEGREE EXAMINATION
FEBRUARY 2006

Paper VIII – MOLECULAR BIOLOGY AND GENETIC ENGINEERING

Time : Three Hours **Maximum : 80 Marks**

Wherever needed answers must be supported by structural illustrations and diagrams.

Section A

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

Write very briefly on:-

1. Restriction Endonucleases.
2. Base sequence of DNA.
3. Transfer RNA.
4. Gene Libraries.
5. Single stranded RNA phages.
6. Recombination in Bacterial Transformation.
7. Co-transduction.
8. Linkage.
9. Plasmids.
10. Transformation Proteins in DNA Viroses.
11. Northern blotting.
12. Discontinuous Replication of DNA.
13. Regulation of Gene Expression.
14. Cosmids.
15. Transgenic plants.
16. Blunt-End Ligation.
17. Transcription in Gene Expression.
18. Gene Libraries.
19. Sex Plasmid.
20. c-DNA.

(20 x 2 = 40 marks)

Section B

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

Write notes on:-

1. Events at the Replication of Fork DNA.
2. The Processing of Prokaryotic RNA.
3. Outline of Translation.
4. Properties of Prokaryotic Initiator tRNA.
5. The Lysogenic cycle.
6. Synthesis of rRNA and tRNA.
7. Properties of Phages.

x 8 = 40 marks)

C 17244

Name.....

Reg. No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, AUGUST 2006

Microbiology

MB 2.3 T—INDUSTRIAL MICROBIOLOGY

(2005 admissions)

Time : Three Hours

Maximum : 80 Marks

Section A

Write about / Answer **all** *the questions each in* 2 *or* 3 *sentences.*
Each question carries 2 *marks.*

1. Continuous fermentation.
2. Heterolactic fermentation.
3. Strain stability.
4. Turbidostat.
5. Storage ageing of beer.
6. Mashing in beer brewing.
7. Strain improvement by mutagenesis.
8. Cloning vector.
9. Deep jet fermenter.
10. Spirulina.
11. Vitamin B_{12} production.
12. Use of proteases in beer brewing.
13. Baker's yeast.
14. Solid substrate fermentation.
15. Hops.
16. Antifoam agents.
17. GRAS status.
18. Clostridium acetobutylicum.
19. Fortified wines.
20. Lactic acid production.

(20 x 2 = 40 marks)

Section B

Write note on / Discuss any **five** *of the following.*
Each question carries 8 *marks.*

21. Isolation and screening of antibiotic producers.
22. Strain improvement.
23. Downstream processing.
24. Citric acid production.
25. Bioassays.
26. Media, and vessel sterilization for fermentation.
27. Production of SCP.

(5 x 8 = 40 marks)