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Name.....

Reg. No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, AUGUST 2006

Microbiology

MB 2.4 T—BIOPHYSICS, BIOSTATISTICS AND BIOINFORMATICS

(2005 admissions)

Time : Three Hours

Maximum : 80 Marks

Section A

*Write about / Answer all the questions very briefly.
Each question carries 2 marks.*

1. Give the difference between Correlation and Regression.
2. Calculate geometric mean from the following data :—

x : 10 20 30 40 50

f : 5 7 2 3 1

3. Null hypothesis and Alternative hypothesis.
4. Coding in analysis of variance.
5. Classical definition of probability.
6. Uses of standard error.
7. Fibrous protein and globular protein.
8. β conformation.
9. Stability of α -helix.
10. Ramachandran plot.
11. Interleukin.
12. Protein Data Bank.
13. Zinc-finger proteins.
14. BLAST.
15. Chromatin.
16. World Wide Web.
17. Server and Work stations.
18. Gen bank data bases.
19. Wildcards in Linux.
20. Allosteric effect in Hemoglobin.

(20 x 2 = 40 marks)

Turn over

Section B

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

21. Explain the term correlation along with its types and the methods to study correlation.
22. Give an account of the 3-dimensional structure of Rubisco.
23. Write the structure of biological membrane. Discuss the methods of transport through biological membrane.
24. Give an account of biological databases.
25. Distinguish between A, B and Z DNA.
26. Illustrate the structure and properties of high energy molecules.
27. What is a native protein ? Discuss the secondary structure of proteins.

(5 x 8 = 40 marks) . **131**