C 42409 (Pages : 2) Name.......................................

Reg. No.................................

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2013

(CUCSS)

Microbiology

MB 4C 11—BIOSTATISTICS AND BIOINFORMATICS

Time : Three Hours

Maximum : 36 Weightage

Part A

Answer all *questions.*
Each question carries 1 weightage.

1. x^2 test is based on :

    (a) Permutation.

    (b) Independent variable.

    (c) Degrees of freedom.

    (d) Combination.

2. SQL stands for :

    (a) Sequence query language.

    (b) Structured query language.

    (c) Structured query lineage.

    (d) Sequence query lineage.

3. KEGG is a :

    (a) Protein structure database.

    (b) Motiff database.

    (c) Bibliographic database.

    (d) Pathway database.

4. Comment on search engine.

5. Which of the following is bibliographic databases :

    (a) Uniprot.

    (b) Agricola.

    (c) MEDMINER.

    (d) CATH.

6. Differentiate between orthologus and paralogus.

7. What is ORF FINDER ?

8. Write the significance of pairwise alignment.

9. What do you mean by progressive alignment.

10. Expand SCOP.

11. RCSB stand for —————————————————

Turn over

12. What is the significance of PROCHECK ?

13. What do you mean by molecular docking ?

14. Comment on superimposition.

(14 x 1 = 14 weightage)

Part B

Write short notes on any seven.
Each carries 2 *weightage.*

15. Regression analysis.

16. Probability Theory.

17. LINUX.

18. SCIRUS.

19. GenBank flat file.

20. PHIBLAST.

21. Molecular clock hypothesis.

22. Threading.

23. PROSITE.

(7 x 2 = 14 weightage)

Part C

Answer any **two** *questions.*
Each carries 4 *weightage.*

24. Explain χ^2 -test with example.

25. What do you mean by homology modelling ? Summarize the basic steps with the help of a flow diagram.

26. What do you mean by phylogram ? Classify and explain various types of phylogenetic tree.

(2 x 4 = 8 weightage)