



Code No. : 9452

FACULTY OF SCIENCE
M.Sc. IV Semester Examination, May/June 2012
BIOCHEMISTRY
Paper – IV : Computational Methods and Bioinformatics

Time : 3 Hours]

[Max. Marks : 80

Note : Answer *all* questions of Part **A** and Part **B**.
Each question in Part **A** carries 4 marks and *each* question
in Part **B** carries 12 marks.

PART – A

(8×4=32 Marks)

1. Write a short note on methods of data presentation.
2. Write notes on use of regression for linear data.
3. Explain about different storage devices of a computer.
4. Write a note on networking concepts and its use in data search.
5. Explain briefly about DNA database.
6. Write a short note on public and restricted EMBL.
7. Write a short note on pharmacogenomics.
8. Explain transcriptome.

PART – B

(4×12=48 Marks)

9. a) Seventeen of a sample of forty five breast-fed babes were found to have an antibody of interest, compared to sixteen of a sample of eighty-five bottle-fed babies. Does this antibody occur in the same proportion in the population of breast-fed and bottle-fed babies ?
 - a) Apply the chi-square procedure with the Yates correction.
 - b) Apply the chi-square procedure with the Haber's correction.

OR



b) Twelve members of one species of insect and eighteen of another species were placed in a container with insecticide fumes. After half of the thirty insects died there were nine of species 1 alive and five alive of species 2. Are these two species of insect equally susceptible to this insecticide ?

a) Apply the Fisher exact test to the hypothesis that two species are equally susceptible to the insecticide.

b) Apply the Fisher exact test to the hypothesis that species 1 is less susceptible to the insecticide.

10. a) Discuss about the softwares used in computers.

OR

b) Describe the features of the components of computers.

11. a) Write an essay on drug designing.

OR

b) Discuss about protein sequencing databases.

12. a) Explain the features of the software used for identification of protein based on its molecular weight.

OR

b) Write an essay on human genome project.