

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, AUGUST 2013

(CUCSS)

General Biotechnology

GB 2C 4—BIOSTATISTICS AND BIOINFORMATICS

Time : Three Hours

Maximum : 36 Weightage

Section A (Very Short Answer Type)

*Answer all the ten questions.
Each question carries a weightage 1.*

1. What is primary data ?
2. Define correlation coefficient.
3. Find mode from the following data :
8 3 10 5 10 7 10 4 10
4. What is histogram ? How is it drawn and when ?
5. What is looping ?
6. Define software and Hardware.
7. Define an algorithm.
8. What is database ?
9. What is BLAST ?
10. Give an example for docking software.

(10 x 1 = 10 weightage)

Section B (Paragraph Type / Short Answer Type)

*Answer any seven questions out of 10 questions.
Each question carries a weightage 2.*

11. What do you mean by skewness and Kurtosis ? How are they calculated ?
12. 10 individuals are selected at random from a population whose heights in inches were found to be 61, 66, 65, 70, 72, 71, 68, 69, 66, 65. Whether the population mean is 66.
13. Define standard deviation (S) and give its mathematical expression.
14. Discuss about different software packages used for performing statistical analysis.
15. Find the correlation coefficient from the following data :

X	:	12	10	8	9	6	7	10	12
Y		22	25	23	27	30	21	25	32

Turn over

16. Briefly discuss the importance of Internet.
17. Explain about prime designing.
18. What do you mean by Ligplot interactions ?
19. Discuss about Database Management system (DBMS).
20. What are the uses of R-programming ?

(7 x 2 = 14 weightage)

Section C (Essay Type)

Answer any two out of three questions, each with weightage 6.

21. Define flow chart. What are the advantages of flow charts ? Mention symbols used in flow charts. How can you develop flow charts for some problems.
22. Compute CV for the following sets of data and check for the consistency.
Set I : 12 18 24 30 35 36 27 30
Set II : 25 23 27 28 22 21 20 22
23. Write down the importance of bioinformatic in protein structure analysis.

(2 x 6 = 12 weightage)