

M.Sc. Bio-Informatics - 3rd Sem.

(2118)

Paper: BI-635

Introduction to data Analysis using R Programming

Time allowed: 3 hrs.

Max. Marks: 75

Section A

Section A is compulsory.

1.5X10 = 15

- 1) What is R Interpreter?
- 2) What are operators in R? Give example.
- 3) What is Vector in R?
- 4) Explain Data Frames.
- 5) What is the difference between Function and script?
- 6) What do you understand by Scatter plot?
- 7) What is lattice Graphics?
- 8) How do you find Quartile using R?
- 9) What is R Base?
- 10) What is Bioconductor?

Section B

Answer one question from each unit

15X4 = 60

Unit 1

- 1) Explain Objects, Expression and arrays in R with one example each.
- 2) Discuss control structures in R with examples.

Unit 2

- 1) What are function and arguments? Create a function which can print "I am R". Add an argument to determine how many times it has to be printed.
- 2) How a text file is read in R? Explain function read.table and read.fwf with an example.

Unit 3

- 1) Create a table containing name of any five genes and their length (arbitrary name and length can be used). Calculate average length using R.
- 2) Discuss hierarchical clustering and its application using R.

Unit 4

- 1) Explain use of Bioconductor for DNA sequence analysis using any three examples.
- 2) Discuss use of R in analysis of RNA-Seq data.
