

Exam. Code : 206603

Subject Code : 4772

M.Sc. Bio-Informatics 3rd Semester (Batch 2020-22)

**INTRODUCTION TO DATA ANALYSIS USING
R PROGRAMMING**

Paper-BI-635

Time Allowed—3 Hours] [Maximum Marks—75

Note :— Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The **fifth** question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. Explain objects, operators and array in R with one example each. What are Data Frames ?
2. Discuss control structures in R. Use "if-else" to find if a number is even or odd.

SECTION—B

3. What are function and arguments ? Create a function f() which can print "Hi, I am learning perl". Use an argument to determine how many times it has to be printed.
4. What is SQLite and DBI ? Discuss their applications.

SECTION—C

5. Create a table containing name of four proteins and their molecular weight (arbitrary name and weight can be used). Calculate average molecular weight of the protein using R. Discuss scatter plot and box plot in R.
6. What is ggplot2 ? Discuss graphics package in R.

SECTION—D

7. Explain application of SequinR for sequence analysis.
8. Discuss application of R in analysis of VAR-seq data.