

(FOR THE CANDIDATES ADMITTED

23UCS619

DURING THE ACADEMIC YEAR 2023 ONLY)

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : MAY-2026

BSc COMPUTER SCIENCE(AIDED & SF)

MAXIMUM MARKS: 75

SEMESTER: VI

TIME : 3 HOURS

PART - III

23UCS619 – R PROGRAMMING

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

(K1)

1. What is R Primarily used for?
 - (a) Statistical Analysis and Data Visualization
 - (b) A Web Development
 - (c) Database Management
 - (d) Operating System Development
2. Which of the following creates a vector in R?
 - (a) c (1, 2, 3) (b) list (1, 2, 3) (c) matrix (1, 2, 3) (d) array (1, 2, 3)
3. In R, what is the result of the expression (1:4)*2?
 - (a) 8 (b) 12 (c) 20 (d) 16
4. Which R function is primarily used to read a CSV file into a data frame?
 - (a) read.table() (b) read.csv() (c) read.xlsx() (d) read_xml()
5. Which type of graph is most appropriate for to displaying the relationship between students' study hours and their exam scores?
 - (a) Pie chart (b) Bar chart (c) Line graph (d) Scatter plot

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES

(K2)

6. List any two advantages of R Programming.
7. Define factor in R.
8. Write the syntax for the if statement.
9. List the uses of summary() function in R.
10. Define a Histogram.

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) Explain any five basic comments in R with suitable examples.

(OR)

- b) Explain how to download and install R.

(CONT...2)

12. a) Demonstrate assignment removes values to the variable with an example.
(OR)
b) Perform the following with suitable examples.
(i) Create a 3x3 matrix. (ii) Write a R program to Add rows and columns in a matrix
13. a) Discuss the loop in R with syntax a suitable example.
(OR)
b) Illustrate the while loop in R with syntax and a suitable example.
14. a) Write a R Program to read a CSV file and compute the mean, median and mode for a numeric column value.
(OR)
b) Write an R Program to use the read_excel() function from the readxl package to import data from an Excel file "sales.xlsx" (sheet 1), then calculate summary statistics for two columns and write the results to a new CSV file "summary.csv".
15. a) Write an R Program to create, 2D and 3D Pie Charts.
(OR)
b) Write an R Program to create a horizontal and Vertical bar charts.

SECTION – C**(5 X 8 = 40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K4 (Or) K5)**

16. a) Describe the steps to install, uninstall, load and unload packages in R.
(OR)
b) Analyze the roles of scripts, comments, and text editors/IDEs (such as RGui or RStudio) in organizing, maintaining, and debugging R code for a data analysis project.
17. a) Perform the following with suitable example:
(i) Create a data frame in R.
(ii) Write an R program to display the structure of a data frame.
(iii) Write an R program to add a new column to an existing data frame.(OR)
b) Distinguish the following with a suitable example.
(i) Creating a List. and accessing its elements..
(ii) Adding and deleting elements in a list
18. a) Describe functions in R Programming with syntax and a suitable example. (OR)
b) Explain any five string functions with suitable example.
19. a) Compare the use of read.csv() for CSV files, read_excel() for Excel files, read_xml() for XML files with suitable example. (OR)
b) Perform a step-by-step analysis in R: Read data from "dataset.csv", compute mean, median and mode for key variables to detect skewness, fit a linear regression model using lm(sales ~ price)and interpret the summary output (coefficients, R-squared, residuals). Provide code and expected interpretation.
20. a) Write an R Program to create a Box Plots and Histograms and Analyze the differences. (OR)
b) Write an R Program create a line chart and scatter plots.
