23CBA416

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BCom DEGREE EXAMINATION DECEMBER 2024
(Fourth Semester)

Branch – **COMMERCE (BUSINESS ANALYTICS)**

R PROGRAMMING

Time: Three Hours Maximum: 50 Marks

SECTION-A (5 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1 What is R primarily used for?
(i) Web development (ii) Statistical analysis
(iii) Graphic design (iv) Game development

2 Which function is used to check for missing values in R?
(i) is.na() (ii) is.null()
(iii) is.nan() (iv) is.empty()

3 What is a list in R?
(i) A collection of vectors of the same type (ii) A collection of objects of different types
(iii) A matrix with named rows and columns (iv) A type of vector

4 Which of the following is a valid for loop syntax in R?
(i) for (i in 1:10) { print(i) } (ii) for i in 1:10 { print(i) }
(iii) for (i : 1 to 10) { print(i) } (iv) for (i = 1; i <= 10; i++) { print(i) }

5 What does the pch argument control in the plot() function?
(i) The color of the points (ii) The type of plot
(iii) The shape of the points (iv) The size of the plot

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6 a List the different ways to create a vector in R. Provide examples for each.
OR
b Describe what a data frame is in R. How does it differ from a vector?

7 a Explain about 2-dimensional array in R.
OR
b Discuss how to multiply two matrices in R.

8 a Explain the purpose of the attach() and deattach() functions.
OR
b How can you combine two data frames in R? Describe the difference between rbind() and cbind() with examples.

Cont...

9 a Discuss the structure of if and else if statements in R. Provide suitable examples.

OR

b With suitable examples explain the purpose of the switch() function in R.

10 a Explain how to create a histogram in R.

OR

b Describe how to add a legend to a plot in R.

SECTION -C (30 Marks)

Answer any **Three** questions
ALL questions carry **EQUAL** Marks (3 x 10 = 30)

11 Explain the R environment and its primary components. How do you interact with R?

12 Define an object in R. What are the different types of objects available in R? Provide examples for each type.

13 Explain the scan() function in R. Provide an example for reading data from a text file.

14 Discuss about for, while and repeat loops with suitable examples.

15 Explain the purpose of the plot() function in R. Provide an example for creating a basic scatter plot with labeled axes.

Z-Z-Z END