PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Sixth Semester)

Branch – MATHEMATICS WITH COMPUTER APPLICATIONS

DISCIPLINE SPECIFIC ELECTIVE – II: DATA ANALYTICS AND 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   Which of the following used to insert comments in R code?
     (i)   #   (ii)   /*
     (iii) //   (iv) **

2   Choose the function is often used to concatenate elements?
     (i)   join()   (ii)   merge()
     (iii) paste()   (iv)   concat()

3   What is the meaning of "< -"
     (i)   Functions   (ii)   Loops
     (iii) Addition   (iv)   Assignment

4   File contains R script ends with extension
     (i)   .S   (ii)   .R
     (iii) .RP   (iv) .SP

5   Which of the following is an example of vector graphics device in R?
     (i)   GIF   (ii)   PDF
     (iii) SVG   (iv) JPEG

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

6   a   Explain common vector operations in detail.
           OR
   b   Describe the higher dimensional arrays in R programming.

7   a   How to create Data frames in R programming with example?
           OR
   b   Explain about Recursive lists in detail.

8   a   Explain in detail about arithmetic operator with example.
           OR
   b   Describe the return values from function in R programming.

9   a   Discuss the math function in R programming.
           OR
   b   Describe the set operations in R.

10   a   Write about the Regular Expressions in R programming.
            OR
   b   Explain the graphical package in R programming.

Cont...

SECTION -C (30 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 x 6 = 30)

11 a   Analyze the general matrix operations in details.
                              OR
    b   Discuss the data structures used in R programming.

12 a   Discuss in detail to creating lists in R programming.
                              OR
    b   Identify the functions on data frames.

13 a   Justify the control statements in R programming.
                              OR
    b   Examine the functions used with table in R.

14 a   Discuss the linear algebra operations on vector.
                              OR
    b   Analyze the methods involve to reading files in R programming.

15 a   Discuss the string manipulation functions in R programming.
                              OR
    b   Discuss the steps for creating pie chart in R programming.

Z-Z-Z   END