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23CBA416N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BCom DEGREE EXAMINATION MAY 2026
(Fourth Semester)

Branch – **COMMERCE (BUSINESS ANALYTICS)**

R-PROGRAMMING

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Identify the command used to list objects in the R environment. (i) ls() (ii) rm() (iii) list() (iv) objects()	K1	CO1
	2	Select the function used to generate regular sequences in R. (i) rep() (ii) c() (iii) length() (iv) seq()	K2	CO1
2	3	Specify the operator used for assignment in R. (i) = (ii) = = (iii) > (iv) <	K1	CO2
	4	Recognize the intrinsic attribute of an R object. (i) mode (ii) color (iii) shape (iv) range	K2	CO2
3	5	Determine the operator used for matrix multiplication. (i) * (ii) ** (iii) %*% (iv) %/%	K1	CO3
	6	Choose the function used to create an array. (i) matrix() (ii) dim() (iii) array() (iv) vector()	K2	CO3
4	7	Indicate the function used to load built-in datasets. (i) read() (ii) load() (iii) scan() (iv) data()	K1	CO4
	8	Identify the function used to attach a data frame. (i) connect() (ii) attach() (iii) load() (iv) link()	K2	CO4
5	9	Select the loop suitable, when the number of iterations is known. (i) while (ii) repeat (iii) for (iv) if	K1	CO5
	10	Recognize the function that creates a new plot in R. (i) lines() (ii) plot() (iii) points() (iv) text()	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain the basic structure of R commands and the methods used to recall and edit previous commands.	K2	CO1
		(OR)		
	11.b.	Illustrate index vectors and their role in selecting subsets of data.		
2	12.a.	Explain intrinsic attributes of R objects with examples.	K2	CO2
		(OR)		
	12.b.	Describe matrix facilities in R.		
3	13.a.	Construct a data frame and apply attach and detach() functions to work with variables.	K3	CO3
		(OR)		
	13.b.	Apply indexing techniques to extract rows and columns from a data frame.		
4	14.a.	Develop a R program using a for loop to generate the multiplication table of a given number.	K3	CO4
		(OR)		
	14.b.	Examine the role of break and next statements in controlling loop execution.		
5	15.a.	Illustrate how mathematical annotations can be added to a graph.	K3	CO5
		(OR)		
	15.b.	Demonstrate how interactive graphical functions are used in R to identify and extract information from plotted data.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Explain data permanency in R and describe how objects are created and removed from the workspace with examples.	K2	CO1
2	17	Describe the recycling rule and outer product of arrays.	K2	CO2
3	18	Use a dataset from another R package and demonstrate how it can be used for data analysis.	K3	CO3
4	19	Illustrate the concept of repetitive execution in R.	K3	CO4
5	20	Demonstrate how graphical parameter settings can be applied to create multiple plots in a single window	K3	CO5

Z-Z-Z END