

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**BSc DEGREE EXAMINATION MAY 2026
(Sixth Semester)**

Branch – INFORMATION TECHNOLOGY

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	Which of the following structure is used to store tabular data in R? (i) Lists (ii) Factors (iii) Data frames (iv) Matrices	K1	CO1
	2	Infer the function that can be used to create vectors of objects by concatenating things together (i) c() (ii) v() (iii) s() (iv) d()	K2	CO1
2	3	What is the name of a function that indicates the class of each column in the dataset (i) rowClasses (ii) colClasses (iii) rClass (iv) cClass	K1	CO2
	4	Predict which package deals with reading large flat files quickly (i) readc (ii) writeR (iii) readr (iv) writeC	K2	CO2
3	5	Recall the name of function that drops all non-transformed variables in data frame (i) Select() (ii) Mutate() (iii) transmute() (iv) arrange()	K1	CO3
	6	Express which operator is used to extract elements of a list or a data frame (i) [[(ii) {} (iii) { (iv) [	K2	CO3
4	7	Which function is applied over subsets of a vector? (i) supply() (ii) mutate() (iii) apply() (iv) tapply():	K1	CO4
	8	Predict the name of the statement that initiates an infinite loop right from the start (i) break (ii) continue (iii) repeat (iv) return	K2	CO4
5	9	Select the function that can be used to draw random samples from arbitrary vectors (i) sample() (ii) seed() (iii) plot() (iv) xlab()	K1	CO5
	10	Express which function creates matrices of scatter plots (i) boxplot() (ii) paris() (iii) scatterplot() (iv) plot()	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.	Show the Features of R Programming.	K3	CO1
		(OR)		
	11.b.	Demonstrate how to Create vectors and mixing objects in vectors with examples.		
2	12.a.	Illustrate the functions that are used to read and write data in R.	K3	CO2
		(OR)		
	12.b.	Determine all the Arguments in read.table() function.		
3	13.a.	Analyze how Subsetting Vectors and subsetting Matrix is performed in R.	K4	CO3
		(OR)		
	13.b.	Examine Operations on Dates and Time in R.		
4	14.a.	Compare lexical and dynamic scoping rules.	K2	CO4
		(OR)		
	14.b.	Explain While loop with example.		
5	15.a.	Figure out all the functions used for probability distributions in R .	K4	CO5
		(OR)		
	15.b.	Correlate similarities with lm() and aov() commands.		

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 Frames and Matrices in R.	K4	CO1
2	17	Analyze dput() and dump() functions to pass data around the R object.	K4	CO2
3	18	Illustrate the use of Data Frame Functions: Select() and Filter() with example.	K4	CO3
4	19	Examine how to create function in R with an example?	K4	CO4
5	20	Explain how to Carry out simple regression and produce a graph with a line of best fit?	K4	CO5

Z-Z-Z

END