CBCS SCHEME - Make-Up Exam

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BDS306C

Third Semester B.E./B.Tech. Degree Examination, June/July 2025
Data Analytics with R

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	**a.**	List and explain basic data types in R programming with example.	**10**	**L2**	**CO1**
	b.	With suitable example discuss 3 kinds of loops used in R.	**10**	**L2**	**CO1**
		OR			
Q.2	**a.**	Write syntax of if and else statement with suitable example.	**8**	**L2**	**CO1**
	b.	Discuss environments variables with example.	**7**	**L2**	**CO1**
	c.	How values can be aligned to variables in R. Describe with example.	**5**	**L2**	**CO1**
		Module – 2			
Q.3	**a.**	Define the following with respect to matrix operations with example. i) rownames( ) and colnames( ) ii) nrow( ) and ncol( ) iii) cbind( ) and rbind( ) iv) Transpose T( ) and Length( ) v) dimnames( ) and dim( ).	**10**	**L2**	**CO2**
	b.	With example discuss any 5 String related functions used in R programming.	**10**	**L2**	**CO2**
		OR			
Q.4	**a.**	Define Matrix. Write the syntax for matrix creation with suitable example.	**6**	**L2**	**CO2**
	b.	Illustrate the concept of factors in R using example.	**8**	**L2**	**CO2**
	c.	Develop a R program to find factorial of a given number using recursive function calls.	**6**	**L2**	**CO3**
		Module – 3			
Q.5	**a.**	Explain any 5 grouping functions used in R programming.	**10**	**L2**	**CO3**
	b.	Discuss the functions used to manipulate the strings used in data cleaning and transforming process in R.	**10**	**L2**	**CO3**

		OR			
Q.6	**a.**	Explain the ways to access DB in R programming.	**6**	**L2**	**CO3**
	b.	Describe in detail Data Reshaping in R with example.	**8**	**L2**	**CO3**
	c.	Discuss with( ), within( ) and mutate( ) functions used for manipulating data frames with example.	**6**	**L2**	**CO3**
		Module – 4			
Q.7	**a.**	Define EDA. List the steps of iterative cycle and techniques used in EDA.	**6**	**L2**	**CO4**
	b.	Illustrate the creation of Box plots using Base graphics along with code snippets.	**8**	**L2**	**CO3**
	c.	Define histogram, write the syntax for creating histogram. Also explain the significance of each parameters.	**6**	**L2**	**CO4**
		OR			
Q.8	**a.**	With syntax discuss : i) Horizontal stacked Bar plot using Lattice graphics ii) Vertical bar plot using base graphics.	**10**	**L2**	**CO4**
	b.	Discuss with syntax how Box plots are created using Lattice graphics and ggplto2 graphics.	**10**	**L2**	**CO4**
		Module – 5			
Q.9	**a.**	Discuss in detail 4 built in functions used to generate normal distribution.	**8**	**L2**	**CO5**
	b.	With syntax explain ℓm( ) and predict( ).	**6**	**L2**	**CO5**
	c.	Explain mean, median and mode with example.	**6**	**L2**	**CO5**
		OR			
Q.10	**a.**	Identify the test used to evaluate the relation between two or more variables in statistical analysis using R. Discuss the same with syntax and example.	**10**	**L2**	**CO5**
	b.	Explain the following with example : i) dbinom( ) ii) pbinom( ) iii) qbinom( ) iv) rbinom( ).	**10**	**L2**	**CO5**

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