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BDS306C

Third Semester B.E./B.Tech. Degree Examination, June/July 2025

Data Analytics with R

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
1 of 2					

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 ggplot2 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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