Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Sixth Semester B.Tech Degree (R,S) Examination May 2024 (2019 Scheme)

Course Code: AIT362

Course Name: PROGRAMMING IN R

Max. Marks: 100 Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks. Marks

1		Write an R program to check whether a number is odd or even.	(3)
2		Explain matrix in R with an example.	(3)
3		List different methods used in binning data.	(3)
4		Explain why data cleaning is considered an important task in data analysis.	(3)
5		Define normal distribution in R.	(3)
6		Explain the t-test.	(3)
7		Explain the function used to plot scatter plots with an R program.	(3)
8		Explain how to plot a pie chart in R.	(3)
9		Explain Nonlinear least squares.	(3)
10		State the applications of regression models.	(3)

PART B

Answer one question from each module, each carries 14 marks.

Module I

11	a)	Write an R program to find the factorial of a number.	(8)
	b)	Illustrate different vector operations in R with examples.	(6)

OR

12	a)	Explain with examples if, if-else and switch statements in R.	(6)
	b)	Write an R program to extract 3rd and 5th rows with 1st and 3rd columns from a data frame.	(8)

Module II

13	a)	Write an R program to create a data frame using two vectors and display the duplicate elements and unique rows in the data frame.	(7)
	b)	Illustrate transformation functions in R.	(7)

OR

14 a) Explain how data is imported from external files with an R program. (7)

b) Write an R program to export the following data to a CSV file. (7)

	id	name	gender	dob	country
1	10	Daisey	M	1990-10-02	Brazil
2	11	Harry	M	1981-03-24	Canada
3	12	Rachelle	F	1987-06-14	France
4	13	Zara	F	1985-08-16	Guinea

Module III

15 a) Explain how the statistical test is performed using R functions. (7)

b) Explain the common distribution type arguments used in R functions for statistical analysis. (7)

OR

16 a) Explain different summary statistics functions in R. (7)

b) Explain different parametric tests in R. (7)

Module IV

17 a) Explain ggplot() with an example. (8)

b) Write R program to create pie chart for the following data. (6)

Housing	600
Food	300
Clothes	150
Entertainment	100
Others	200

OR

18 a) Explain lattice function in data visualization. (8)

b) Illustrate customizing charts in data visualization. (6)

Module V

19 a) Explain corrective measures of unusual observations in regression modelling. (8)

b) Compare and contrast logistic regression with poisson regression. (6)

OR

20 a) Explain linear and multiple regression. (7)

b) Illustrate model fitting in simple linear model. (7)

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