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G. VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS), KOVILPATTI – 628 502.



UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2024.

(For those admitted in June 2021 and later)

PROGRAMME AND BRANCH: B.Sc., STATISTICS

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
V	PART - III	CORE	U21ST510	DATA ANALYSIS USING R

Date &amp; Session: 13.11.2024 / FN

Time: 3 hours

Maximum: 75 Marks

Course Outcome	Bloom's K-level	Q. No.	SECTION - A (10 X 1 = 10 Marks) Answer ALL Questions.
CO1	K1	1.	A function that returns the square root of a number. (a) sqrt( )                      (b) sq( )                      (c) sqt( )                      (d) sqroot( )
CO1	K2	2.	State the missing data types used in R. (a) N, NIL                      (b) NA, NULL                      (c) N, NULL                      (d) NA, NIL
CO2	K1	3.	JSON stands for. (a) Java Script Object Notation                      (b) Java Super Oriented Number (c) Java Specific Object Notation                      (d) Java Select Oriented Note
CO2	K2	4.	Specify the function used for histogram in R. (a) hit( )                      (b) histog( )                      (c) hist( )                      (d) plot( )
CO3	K1	5.	Which of the following is a decision-making statement? (a) If                      (b) Array                      (c) Matrix                      (d) GGplot
CO3	K2	6.	Which is tested first in an entry-controlled loop? (a) body of the loop                      (b) main function (c) argument list                      (d) test condition
CO4	K1	7.	'mapply' function stands for. (a) Match Apply                      (b) Modify Apply (c) Multivariate Apply                      (d) Mean Apply
CO4	K2	8.	The p.m.f. of Binomial distribution is. (a) $nCx p q$ (b) $nCx p^x q^{n-x}$ (c) $nx p^x q^{n-x}$ (d) $nCx p q^{n-x}$
CO5	K1	9.	Linear relationship of two variables is called as (a) Correlation                      (b) Regression                      (c) Mean                      (d) Range
CO5	K2	10.	ANOVA stands for. (a) Analysis of Covariance                      (b) Analysis of Correlation (c) Analysis of Variance                      (d) Analysis of Volatility

Course Outcome	Bloom's K-level	Q. No.	<p style="text-align: center;"><b>SECTION – B (5 X 5 = 25 Marks)</b>  <b>Answer <u>ALL</u> Questions choosing either (a) or (b)</b></p>
CO1	K3	11a.	Describe about a variable in R. <b>(OR)</b> Write a short note on vector operations.
CO1	K3	11b.	
CO2	K3	12a.	How do you extract data from a website? <b>(OR)</b>
CO2	K3	12b.	What is the importance of <i>ggplot2</i> package?
CO3	K4	13a.	Comment on return values in R. <b>(OR)</b>
CO3	K4	13b.	Specify the main theme of <i>if else</i> statement with example.
CO4	K4	14a.	Write a short note on <i>plyr</i> package. <b>(OR)</b>
CO4	K4	14b.	Elaborate the p.m.f. for Poisson distribution in R.
CO5	K5	15a.	Explain one sample t-test and give its basic syntax in R. <b>(OR)</b>
CO5	K5	15b.	Write the R code for computing simple Linear regression and explain the each line of R code.

Course Outcome	Bloom's K-level	Q. No.	<p style="text-align: center;"><b>SECTION – C (5 X 8 = 40 Marks)</b>  <b>Answer <u>ALL</u> Questions choosing either (a) or (b)</b></p>
CO1	K3	16a.	Write in detail on data types in R. <b>(OR)</b>
CO1	K3	16b.	Explain the concept of Matrices and Arrays in R.
CO2	K4	17a.	Comment on the reading csv data file in R. <b>(OR)</b>
CO2	K4	17b.	Explain the main diagrams of graphics in R.
CO3	K4	18a.	How to make use of <i>if</i> and <i>switch</i> statement in R? <b>(OR)</b>
CO3	K4	18b.	Write down the manipulate of various loops in R.
CO4	K5	19a.	Write short notes about <i>apply</i> function in R. <b>(OR)</b>
CO4	K5	19b.	Illustrate the Binomial and Normal distribution with R function.
CO5	K5	20a.	Give the R code for computing correlation and covariance and explain its relations. <b>(OR)</b>
CO5	K5	20b.	Write the R syntax for comparing the means of two groups and explain each methods with their assumptions.