MAHATMA GANDHI UNIVERSITY, KOTTAYAM MGU-UGP (HONOURS) SECOND SEMESTER EXAMINATION (2024 ADMISION ONWARDS) MG2MDCSTA101 - Data Analysis using JAMOVI and Introduction to R

Duration: 1 Hour

Maximum Marks: 35

Students should attempt at least one question from each course outcome to enhance their overall outcome attainability.

Part A

Multiple Choice Questions Answer **All** Questions Each question carries **2** marks

1.A study measures the income levels of individuals in five different cities. The income data is collected in three categories: low income, middle income, and high income. The cities are then ranked based on their average income. What type of data is being used in this scenario? [An] [2]

a) Nominal	b) Ordinal
c) Interval	d) Ratio

2. A scatter diagram is plotted with the number of hours studied on the x-axis and exam scores on the y-axis. If the points form a pattern where exam scores increase as the number of hours studied increase, what kind of relationship does the scatter diagram show? [An] [3]

a) Negative correl	lation b) No correlation
c) Positive correla	ation d) U-shaped curve
3. Which measure of central ten	idency is most affected by outliers? [U] [2]
a) Mean	b) Median
c) Mode	d) Standard deviation
4. Which relative measure is us	ed to compare the variability of two or more
groups? [A] [2]	-

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a) Range	b) Variance
c) Coefficient of Variation	d) Standard deviation

5. The assumption of linearity in linear regression means: [U] [3]

a) The relationship between the dependent and independent variables is linear

b) The residuals should be normally distributed.

c) The residuals should have a mean of zero.

d) The residuals should be uncorrelated with each other.

6. The output of logistic regression is always [U] [3]

a) 0 b) 1 c) 2 d) 0 or 1

7. Which one of the following is an arithmetic operator in R? [U] [4]

a) = = b) > = c) & d) + b

8. In R, which statement is used to terminate the execution of a loop? [A] [4]

a) Next b) Skip c) Break d) Delete

9. Which function is used to create data frame in R? [K] [4]

a) create.data.frame ()	b) data.frame ()
c) make.data.frame ()	d) df()

10. What is R Markdown primarily used for? [U] [4]

a) Writing HTML code	b) Combining R code, text, and plots in a docume	nt
c) Managing databases	d) Running Java programs	

[2x10=20]

Part B

Short Essay Type Questions Answer any **three** Questions Each question carries **5** marks

- 11. Explain the different scales of measurement. [U] [2]
- 12. Describe a situation in which correlation is applied in data analysis. [A] [3]
- 13. What are the assumptions of linear regression? [U] [3]
- 14. List the various data types in R programming language. [K] [4]
- 15. Prepare a short note on R Markdown. [U] [4]

[5x3=15]