R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, January/February - 2023
INTRODUCTION TO DATA SCIENCE
(Computer Science and Engineering – Data Science)

Time: 3 Hours   **Max. Marks: 75**

Note: i) Question paper consists of Part A, Part B.

      ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.

      iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a)	Define statistical inference.	[2]
b)	Write about basic data types in R.	[3]
c)	Explain about type of an Attribute.	[2]
d)	Describe about Mean, Median, and Mode.	[3]
e)	What are structured array? Give examples.	[2]
f)	Explain about how to merging lists.	[3]
g)	Explain about logical operators with example.	[2]
h)	Define Recursion in R.	[3]
i)	Define Clustering.	[2]
j)	Explain about Sampling.	[3]

PART – B

(50 Marks)

2.a)	What is Data Science? Explain Data Science process.	
b)	Describe about probability distributions and fitting a model.	[5+5]

OR

3.a)	Write the advantages of R programming. Explain various features of R language with necessary examples.	
b)	Write a R program for matrix multiplication.	[5+5]

4.a)	Describe about asymmetric attributes and binary attributes in detail.	
b)	Explain about describing attributes by the number of values.	[5+5]

OR

5.a)	Evaluate measuring the Central Tendency.	
b)	Analysis of graphic displays of basic statistical descriptions of data.	[5+5]

6.a)	What is a vector in R? List the difference between vector and list.	
b)	Explain the different concepts of arrays in R Language.	[5+5]

OR

7.a)	Explain about ordered and unordered factors in R.	
b)	Describe about creating a named list and accessing list elements.	[5+5]

8.a) Describe about conditional statements in R with example.
  b) Explain about vectors with example program. [6+4]

OR

9.a) How to load an R Package and describe mathematical functions in R.
  b) Calculate probability for n*(n-1) functions. [5+5]

10.a) Explain about regression and Log-Linear Models.
   b) Describe about Wavelet Transforms and Data Cube Aggregation. [5+5]

OR

11.a) Compare between pixel-oriented and geometric projection visualization techniques.
   b) Describe about different about hierarchical visualization techniques. [5+5]

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