Code No: 763AC

R19

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MBA III Semester Examinations, March/April - 2023
DATA ANALYTICS

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) What is the importance of data analytics in business?   [5]
  b) What is the nature of Gaussian distribution? How is it, unique?   [5]
  c) Distinguish between one- way and two-way ANOVA.   [5]
  d) What does data exploration and reduction involve?   [5]
  e) Briefly explain the use of decision tree analysis in problems involving a measure of probability, of success or failure.   [5]

PART - B

(50 Marks)

2.a) Why classification of data is considered hierarchical in nature?
  b) Explain the use of bubble chart for comparing stock characterisitcs.   [5+5]

OR

3.a) What do you understand by frequency distributions for categorical data?
  b) Explain the process of computing percentiles.   [5+5]

4.a) With an example explain multiplication law of probability.
  b) Explain the use of scatter chart for determining covariance.   [5+5]

OR

5.a) The students of a class have elected five candidates to represent them on the college management counticil.

Sl. No.	gender	Age in years
1	male	18
2	male	19
3	female	22
4	female	20
5	male	23

This group decides to elect a spokesperson by randomly drawing a name from a hat. Calculate the probablity of the spokesperson being either female or over 21 years.
  b) Brief on data modeling.   [7+3]

6.a) What are assumptions of linear discriminant analysis?
  b) Briefly explain the process of constructing regression line using the method of least squares. [5+5]

OR

7. Calculate the coefficient of correlation between X and Y from the following data: [10]

Marks in English (X)	2	5	4	6	9
Marks in mathematics (Y)	3	4	4	8	9

8.a) Explain how disciminant analysis serves the purpose of classfiying new data.
  b) What is validation data set? How is it useful? [5+5]

OR

9.a) How do you measure classification performance?
  b) What is cause and effect modeling? [5+5]

10.a) Write a small note on stochastic simulation and random numbers.
   b) What are the advantages and limitations of simulation models? [5+5]

OR

11. Distinguish between solutions derived from simulation models and solutions from analytical models. Highlight some of the problem areas of application, where simulation is considered most preferable. [10]

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