

Code No: 783AC

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MBA III Semester Examinations, February - 2024

BUSINESS ANALYTICS

Time: 3 Hours

Max.Marks:60

**Note:** This question paper contains two parts A and B. i) **Part- A** for 10 marks, ii) **Part - B** for 50 marks.

- Part-A is a compulsory question which consists of ten sub-questions from all units carrying equal marks.
- Part-B consists of **ten questions** (numbered from 2 to 11) **carrying 10 marks each**. From each unit, there are two questions and the student should answer one of them. Hence, the student should answer five questions from **Part-B**.

**PART- A****(10 Marks)**

- Define the term "Data." [1]
- What is Pivot Table? [1]
- What do you mean by "Population" in analytics? [1]
- Define measures of association in statistics. [1]
- Define simple Regression. [1]
- Define Analysis of Variance (ANOVA). [1]
- What do you mean by cluster analysis? [1]
- What is the primary objective of data mining? [1]
- What is decision tree analysis? [1]
- Define risk analysis in the context of simulation. [1]

**PART-B****(50 Marks)**

- What is the significance of data in today's business environment and examine the application of business analytics in practice? [10]

**OR**

- What is the importance of data visualization? Explain about various tools used for data visualization with suitable example. [10]

- What are the measures of dispersion? Explain the purpose of measures of dispersion? [5+5]
- Describe the measures of variability in brief. [5+5]

**OR**

- Find out the Standard Deviation from the following data:

Age in Years	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of People affected	6	10	32	35	24	14	8

- Describe the terms data modeling and distribution fitting. [6+4]
- Explain the process of constructing regression line using the method of least square [6+4]
- How do you build good regression models? [6+4]

**OR**

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7.a) Calculate Karl Pearson's coefficient of correlation between expenditure on advertising and sales from the data given below:

Advertising expenses ('000 Rs.)	39	65	62	90	82	75	25	98	36	78
Sales (lakh Rs.)	47	53	58	86	62	68	60	91	51	84

b) Brief on linear discriminant analysis importance in analytics. [6+4]

8.a) Discuss the potential applications and benefits of data mining in various industries.

b) Describe the methods of data exploration. [6+4]

**OR**

9.a) Explain about the K-Nearest Neighbors (KNN) algorithm.

b) Discuss the logistics regression with an example. [6+4]

10. Describe the purpose of What If Analysis in the context of decision-making. [10]

**OR**

11. Explain the steps involved in Monte Carlo Simulation. [10]

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