

**R18**

**Code No: 155AT**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech III Year I Semester Examinations, July/August - 2023**

**DATA ANALYTICS**

**(Common to CSE, IT)**

**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 Data Architecture. [2]
- b) List the various sources of data. [3]
- c) What are various steps involved in Data Analytics? [2]
- d) Mention the features of Cloudera Impala. [3]
- e) What is Logistic Regression? [2]
- f) What are the advantages of Variable Rationalization? [3]
- g) Name some tools for building Decision Tress. [2]
- h) Give the significance of value of MFE. [3]
- i) What is Chernoff Faces technique? [2]
- j) List the advantages of Data Visualization. [3]

**PART - B**

**(50 Marks)**

- 2.a) List and explain about the elements of Design Data Architecture.
- b) Define Data Quality. Explain methods to achieve the Quality of Data. [5+5]

**OR**

- 3.a) Compare the Data Collection methods for Primary Data and Secondary Data.
- b) Demonstrate the importance of Data Processing in Analytics. [5+5]

- 4.a) Identify key differences between Structured and Unstructured data.
- b) Discuss in brief about different Data Modeling Techniques. [5+5]

**OR**

- 5.a) Discuss about application of Modelling in Business.
- b) "Qualitative variables are not categorical". Justify with suitable example. [5+5]

- 6.a) What is Least Square Estimate? Illustrate its importance in Regression Modeling.
- b) Discuss about Analytics applications to various Business Domains. [5+5]

**OR**

- 7.a) List and explain the steps involved in Model Construction.
- b) Apply Logistic Regression to demonstrate Binary classification. [5+5]

QA QA QA QA QA QA QA Q

- 8.a) Demonstrate Multiple Decision Tree classification with a suitable example.
- b) Compare and contrast the ARIMA and ARMA models.

[5+5]

QA QA QA QA QA QA QA Q

- 9.a) Discuss about CHAID algorithm along with its limitations.
- b) Explain the components of Time Series data.

[5+5]

- 10.a) Demonstrate Geometric projection visualization techniques.
- b) Discuss about visualizing the Complex Data and their Relations.

[5+5]

**OR**

QA QA QA QA QA QA QA Q

- 11.a) Apply Dimensional Stacking and explain how to visualize Multivariate data.
- b) Describe the various steps involved in data visualizing in Tableau.

[5+5]

**---ooOoo---**

QA QA QA QA QA QA QA Q

QA QA QA QA QA QA QA Q

QA QA QA QA QA QA QA Q

QA QA QA QA QA QA QA Q

QA QA QA QA QA QA QA Q