

BACHELOR OF TECHNOLOGY (CBCS) (2020 COURSE)
B.Tech.Sem - VII IT : WINTER : 2023
SUBJECT : BUSINESS INTELLIGENCE

Day : Tuesday
Date : 5/12/2023

Time : 02:30 PM-05:30 PM
Max. Marks : 60

W-24758-2023

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data if necessary.
- 4) Use of **Non Programmable CALCULATOR** is allowed.

Q.1 You have a dataset with missing values in the "Age" column and the "Designation" column. How would you preprocess this data and what methods could you use to input missing values? (10)

OR

In machine learning project. You have features with different scales (e.g. age in years and income in thousands) how would you preprocess these features to ensure they don't bias the model? (10)

Q.2 Why is data cleaning and transformation important in the context of data warehousing? (10)

OR

Suppose you are designing the scheme for Data Warehouse to support sales analysis. What tables and relationships would you include in the schema and why? (10)

Q.3 Describe the steps involved in conducting a hypothesis test including the formulation of hypothesis, data collection and interpretation of the results. (10)

OR

Suppose you work for coffee shop and want to test if the mean coffee temperature different from the ideal temperature of 175°F you take a random sample of 30 cups and find the mean temperature to be 178°F with a standard deviation of 3°F perform one sample t-test and interpret the result. (10)

Q.4 What is primary goal of data visualization? What are different types of charts and graphs used in data visualization? (10)

OR

Explain regression-based forecasting model. Explain the role of leading variable, lagging variable, covariance and correlation coefficient. (10)

Q.5 What is significance of time series? Explain components of time series analysis. (10)

OR

What are different data types of time series? Enlist statistical tests performed to test if dataset is stationary. Explain any one. (10)

Q.6 What are different types of visualizing big data? Explain any two chart types with example. (10)

OR

Explain flow of map reduce in data processing of big data. (10)

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