
Answer any FIVE Questions One Question from Each Unit

Question No.11 is Compulsory

UNIT-I

1. a Define data mining and explain its importance in modern business decision-making. 6M
- b Describe the scope of data mining and its relationship with data warehousing 6M

OR

2. a Discuss various profitable applications of data mining in business organizations. 6M
- b With a neat diagram, explain how a data mining process works from data input to knowledge discovery. 6M

UNIT-II

3. a Define Business Intelligence (BI). Differentiate BI, Data Warehouse, and Data Mining. 6M
- b Explain various Business Intelligence tools and infrastructure components with examples 6M

OR

4. a Explain data cleaning, integration, and transformation with suitable examples. 6M
- b Write a note on data reduction and discretization 6M

UNIT-III

5. a Differentiate between Data Mining and Database Management Systems 6M
- b Explain about Association Rules, Classification, Regression, and Clustering. 6M

OR

6. a What is cluster analysis? Explain Hierarchical clustering technique 6M
- b Differentiate between agglomerative and divisive clustering. 6M

UNIT-IV

7. a Define Web Mining. Discuss its scope and importance in e-commerce 6M
- b Explain Web Content Mining, Web Structure Mining, and Web Usage Mining. 6M

OR

8. a Discuss agent-based and database approaches in web mining. 6M
- b Describe the role of web mining software in enhancing customer experience and business growth. 6M

UNIT-V

9. a Discuss various business applications of data mining with suitable examples 6M
- b How is data mining applied in risk management and targeted marketing? 6M

OR

10. a How does data mining support scientific research and pattern discovery? 6M
- b Write short notes on fraud detection, sentiment analysis. 6M

You are a data analyst at a retail company that sells products both online and offline. The management wants to use data mining to improve sales forecasting, customer retention, and targeted promotions. However, the company's data is inconsistent, contains duplicates, and comes from multiple sources.

- a.** Explain how data preprocessing can improve the quality of analysis.
- b.** Suggest suitable data mining techniques that could help identify customer segments.
- c.** Discuss how implementing Business Intelligence (BI) tools can support better decision-making and profitability.