

**REVISED COURSE
(3 HOURS)**

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[TOTAL MARKS:80]**

- N.B. 1.Question 1 is compulsory
2.Attempt any three question out of the remaining five question.

- Q.1(a) Define Buisness intelligence and decision support systems with examples 10
(b) Explain Data mining as a step in KDD. Give the architecture of typical Data Mining system. 10
- Q.2 (a) Explain BIRCH algorithm with example 10
(b) Explain different visualization techniques that can be used in data mining 10
- Q.3 (a) Explain Multilevel association rules with suitable examples 10
(b) Define classification , issues of classification and explain ID3 classification with example 10
- Q.4(a) Why is Data Preprocessing required? Explain the different steps involved in data preprocessing 10
(b) What is text mining ? Explain different approaches to text mining 10
- Q.5 (a) Explain Buisness Intelligence Issues 10
(b) What is clustering? Explain k- means clustering algorithm. Suppose the data for clustering - {2,4,10,12,3,20,11,25}
Consider $k=2$, cluster the given data using above algorithm. 10
- Q.6(a) Explain sequence mining in Transactional databases 10
(b) Design a BI system for fraud detection by describing all the steps from Data Collection to Decision Making 10

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