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**BCACAC 212**

**Credit Based Third Semester B.C.A. Degree  
Examination, October/November 2016  
(Common to All Batches)  
DATA MINING**

Time : 3 Hours

Max. Marks : 80

**Note : Answer any ten questions from Part A and one full question from each Unit in Part B.**

**PART – A**

**(10×2=20)**

1. a) Define Data Mining.
- b) Define Data Cube.
- c) What is deviation detection ?
- d) Define the terms Confidence and Support.
- e) Define FP-tree.
- f) Differentiate Numerical and categorical clustering.
- g) What are Gain Ratio and Gini Index ?
- h) Define Rough Set.
- i) What is Entropy ?
- j) What is Page Rank ?
- k) What do you mean by Sequence Analysis ?
- l) What is episode discovery ?

**PART – B**

**Unit – I**

2. a) Explain the following OLAP operations with neat diagrams.
  - i) Drill up
  - ii) Dicing.
- b) What is Data Mart ? Explain its types.
- c) Explain Data Warehouse Back end Process.





- 3. a) Explain different Data Warehouse Schema.
- b) Explain the various stages of KDD.
- c) Briefly explain any four application fields of Data Mining. (5+5+5)

**Unit – II**

- 4. a) Explain Apriori algorithm with an example.
- b) Explain briefly hierarchical and partitioning clustering.
- c) Write a brief note on CLARA. (5+5+5)
- 5. a) Explain Partition algorithm with an example.
- b) Explain the principle of Tree Construction.
- c) Explain ID3 decision tree algorithm. (5+5+5)

**Unit – III**

- 6. a) Explain the following terms :
  - i) Information System
  - ii) Indiscernibility Relation.
- b) Explain the typical artificial neurons with activation function.
- c) Describe the learning technique in Mutli Layer Perceptron. (5+5+5)
- 7. a) Explain Rough Set Theory.
- b) Explain RBFN with a neat diagram.
- c) Explain the Support Vector Machines. (5+5+5)

**Unit – IV**

- 8. a) Explain the types of Web Usage mining.
- b) Write a note on web structure mining.
- c) Explain Sequence mining with suitable example. (5+5+5)
- 9. a) Explain different features of unstructured text.
- b) Explain different types of temporal data mining.
- c) Explain Episode discovery. (5+5+5)