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07MCA542

## Fifth Semester MCA Degree Examination, June 2012

### Data Mining

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions.**

- 1
  - a. What is data mining? Explain the knowledge discovery process in data mining. (05 Marks)
  - b. Explain the general characteristics of data sets. (05 Marks)
  - c. Explain the measurement and data collection issues related to data quality. (10 Marks)
- 2
  - a. Explain any four types of data attributes, with suitable examples. (10 Marks)
  - b. What is data preprocessing? What are the steps involved in it? Explain any two steps in detail? (10 Marks)
- 3
  - a. Explain the various measures for selecting the best split. (05 Marks)
  - b. Explain the sequential covering algorithm for rule extraction. (05 Marks)
  - c. Discuss general – to – specific and specific – to – general rule growing strategies. Give suitable examples. (10 Marks)
- 4
  - a. Write and explain the apriori algorithm for finding frequent item sets. (10 Marks)
  - b. Explain the alternative methods for generating frequent item sets (Traversal method). (10 Marks)
- 5
  - a. What are the factors affecting the computational complexity of apriori algorithm? Explain them. (10 Marks)
  - b. Explain FP – growth algorithm to find frequent itemset. (10 Marks)
- 6
  - a. Explain k – nearest neighbour classifier. (05 Marks)
  - b. Explain the different types of clusters. (05 Marks)
  - c. Explain different types of clustering. (10 Marks)
- 7
  - a. Give an overview of cluster evaluation. (05 Marks)
  - b. Write a note on spatial data mining. (05 Marks)
  - c. Explain the different approaches used in text mining. (10 Marks)
- 8
 

Write short notes on :

  - a. Applications of data mining to financial data analysis. (05 Marks)
  - b. Features used to assess data mining system. (05 Marks)
  - c. Explain the role of data mining in science and engineering. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

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