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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)

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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.