

S.D.E.

**M.C.A. SEM - IV : WINTER - 2017**  
**SUBJECT : DATA WAREHOUSING & DATA MINING**

Day : **Thursday**  
Date : **21/12/2017**

**W-2017-4430**

Time : **02.00 P.M. TO 05.00 P.M.**  
Max. Marks : 80

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**N.B.:**

- 1) Attempt **ANY FIVE** questions from Section – I and **ANY TWO** questions from Section – II.
  - 2) Answers to both the sections should be written in **SEPARATE** answer books.
  - 3) Figures to the right indicate **FULL** marks.
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**SECTION – I**

- Q.1** Compare databases and data warehouse with similarities and differences. [10]
- Q.2** Describe three challenges to data mining regarding methodology used and user interaction issues. [10]
- Q.3** Discuss Apriori algorithm for finding frequent item sets. [10]
- Q.4** Discuss K-means algorithm for clustering. [10]
- Q.5** Explain the term data integration and transformation. [10]
- Q.6** What is decision tree? Discuss any algorithm for inducing a decision tree. [10]
- Q.7** Write short notes on **ANY TWO** of the following: [10]
- a) OLAP v/s OLTP
  - b) Classification
  - c) Unsupervised learning

**SECTION – II**

- Q.8** A super speciality hospital is generating a large amount of medical data. The hospital has 20 major and 5 minor units. The hospital is well equipped and adequately staffed. Every unit has 2 sections (IPD and OPD). Each unit maintains history records of patient under it in different format. Design a data warehouse with a suitable architecture for the hospital. Suggest how the hospital can use the data warehouse for better hospital and patient management. [15]
- Q.9** Explain with example that items in a strong association rule may actually be negatively correlated. [15]
- Q.10** Discuss application of data mining for an university. [15]

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