

Roll No.

67172

**M.C.A. 4th Sem.
(with new notes - M.M. 80.)**

Examination-May, 2016

Data Warehousing & Mining (New)

Paper-MCA-402

Time : 3 hours

Max. Marks : 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

Note : Question No. 1 is **compulsory**. Attempt

four more questions selecting **one**

question from each unit. All questions

carry equal marks.

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(1)

[Turn Over

1. Answer the following questions briefly :
[8×2=16]

- (a) What is virtual data warehouse ?
- (b) What is the need of multidimensional data model ?
- (c) What is apex cuboid ? Give an example.
- (d) What do you mean by partial and full materialization of cuboids ?
- (e) What is knowledge Discovery ? List the steps of knowledge discovery process.
- (f) What do you mean by concept hierarchy ? Give an example.

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(g) What is association rule ? What are its types ?

(h) What is outlier analysis ? Discuss its significance.

Unit-I

2. What is data warehouse ? What are its applications ? Explain the various components of a data warehouse system with the help of a diagram. [16]

3. Compare the following concepts and also give example of each: [16]

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[Turn Over

- (a) Snowflake schema and star schema
- (b) Data cleaning and data transformation
- (c) Enterprise warehouse, data mart and virtual warehouse.

Unit-II

4. (a) Explain following OLAP operations for multidimensional data with suitable examples: [8]

- (i) Rollup
- (ii) Drill down
- (iii) Dice
- (iv) Pivot

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- (b) Differentiate ROLAP, MOLAP and HOLAP servers. [8]

5. (a) What is data cube ? Explain with the help of an example. How many cuboids can be formed in n-dimensional data cube ? [8]

- (b) What are various methods of indexing of OLAP data ? Explain. [8]

Unit-III

6. (a) What is data reduction ? Why is it required ? Also discuss various strategies for data reduction. [8]

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(b) What is data cleaning ? Discuss various methods of data cleaning. [8]

7. (a) Discuss various interestingness measures in data mining system ? Also discuss their significance. [8]

(b) What is Apriori algorithm ? Illustrate each step using an example. [8]

Unit-IV

8. (a) Discuss classification process using Backpropagation algorithm with the help of an example. [10]

(b) Write a short note on web mining. [6]

67172-1350-(P-7)(Q-9)(16) (6)

9. (a) What is clustering ? List and Compare various techniques of clustering. [10]

(b) Write a short note on spatial data mining. [6]

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(7)