21415

3 Hours/100 Marks   Seat No.

Instructions : (1) **All** questions are **compulsory**.
  (2) Illustrate your answers with **neat** sketches **wherever** necessary.
  (3) Figures to the **right** indicate **full** marks.
  (4) Assume **suitable** data, if **necessary**.

MARKS

1. a) Attempt **any three** :   **(4×3=12)**
   a) Define data and model management.
   b) Describe four benefits of data warehousing.
   c) Describe the need for OLAP.
   d) State the concept description in data mining.

   b) Attempt **any one** :   **(6×1=6)**
   a) Describe any six characteristics of data warehouse.
   b) What is data reduction ? State its different techniques.

2. Attempt **any two** :   **(8×2=16)**
   a) Describe the significant role of metadata with examples.
   b) Describe the following schemas for multidimensional database.
      1) star
      2) snowflakes
      3) star join
      4) fact constellation measures.
   c) State the association rules in data mining. Write applications of each rule.

3. Attempt **any four** :   **(4×4=16)**
   a) Define Decision Support System and describe ingredients of DSS.
   b) State the data transformation with neat diagram.
   c) Describe concept of hierarchy with an example.
   d) Describe Market Basket Analysis with an example.
   e) State data cleaning with its different techniques.

4. a) Attempt **any three** : (4×3=12)
   a) Describe any four needs of data warehousing.
   b) Describe OLAP tools.
   c) Write various benefits of data warehouse.
   d) Describe data integration with an example.

   b) Attempt **any one** : (6×1=6)
   a) Draw block diagram of data warehouse architecture and state the function of each component.
   b) Describe the Apriori algorithm.

5. Attempt **any two** : (8×2=16)
   a) Describe four different OLAP operations in the multidimensional model with neat diagram.
   b) State the following mining techniques :
      i) Constraint based association mining
      ii) Sequential mining.
   c) Define knowledge discovery and describe any six innovative techniques for knowledge discovery.

6. Attempt **any four** : (4×4=16)
   a) State the terms related to data mining :
      i) Data generalization and
      ii) Summarization.
   b) Describe data integration with an example.
   c) State the term mining which applied to World Wide Web.
   d) Enlist any four applications of data mining in business.
   e) Describe the different issues regarding classification and predication.

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