



# 17520

**15116**

**3 Hours / 100 Marks**

Seat No.

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- Instructions :**
- (1) *All questions are compulsory.*
  - (2) *Answer **each** next main question on a **new** page.*
  - (3) *Figures to the **right** indicate **full** marks.*
  - (4) *Assume suitable data, **if necessary**.*

**Marks**

1. a) Attempt **any three** of the following : **12**
- a) Describe the need of datawarehousing.
  - b) Describe the role of metadata in datawarehouse.
  - c) Explain schema for star multidimensional database.
  - d) Explain concept description.
- b) Attempt **any one** of the following : **6**
- a) Describe various characteristic of datawarehouse.
  - b) Why there is need of preprocessing of data ?
2. Attempt **any two** of the following : **16**
- a) Describe the method of handling missing value for data cleaning.
  - b) Describe schema for following multidimensional database :
    - 1) Snowflake
    - 2) Star join
  - c) Explain market basket analysis.
3. Answer **any four** of the following : **16**
- a) Give brief introduction of decision support system.
  - b) Explain data integration in warehouse.
  - c) State the term mining which applied on world wide web.
  - d) Describe method of generalization based on characterization.
  - e) Describe the concept of hierarchy generation for numeric data.

**P.T.O.**



4. A) Attempt **any three** of the following : 12
- a) How does data reduction technique help to reduce size of data ?
  - b) Describe need for OLAP in warehouse.
  - c) Draw block diagram of datawarehouse architecture and state the function of each component.
  - d) Describe data cube aggregation strategy for data reduction technique.
- B) Attempt **any one** of the following : 6
- a) Describe the Apriori algorithm.
  - b) Describe various categories of DSS.
5. Attempt **any two** of the following : 16
- a) Describe OLAP operation in multidimensional data model.
  - b) Explain the concept of constraint based association mining.
  - c) Explain application of knowledge discovery in fraud detection.
6. Attempt **any four** of the following : 16
- a) State association rule in data mining. Write application of each rule.
  - b) Define metadata and classify metadata into technical and business metadata.
  - c) State the meaning of mining text database.
  - d) Describe the concept of sequential mining.
  - e) Describe data classification by decision tree induction.
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