

22621

24225

3 Hours / 70 Marks

Seat No.

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- 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. Attempt any FIVE of the following :

10

- (a) List and explain Benefits of Data Warehousing.
- (b) Describe Roll-up operation with example.
- (c) Define Bitmap Index.
- (d) Define Data Mining.
- (e) Explain cluster analysis.
- (f) Describe need of data warehousing.
- (g) Describe Drill-Down operation with example.

2. Attempt any THREE of the following :

12

- (a) Explain ETL process with neat diagram.
- (b) Explain need of OLAP in detail.
- (c) Describe Data warehouse design & its usage.
- (d) Explain Market Basket analysis concept with example.



- 3. Attempt any THREE of the following : 12**
- (a) Differentiate both operational database & data warehouse. (Any two points)
 - (b) Explain Slice – Dice & pivot operation of OLAP with example.
 - (c) Explain Data object & its attribute.
 - (d) Explain clustering method.
- 4. Attempt any THREE of the following : 12**
- (a) Describe how data warehouse is used for information processing.
 - (b) Explain steps in the process of knowledge discovery of database.
 - (c) Compare OLAP server architecture (ROLAP vs MOLAP vs HOLAP). (Any two points)
 - (d) Explain major issues in Data Mining.
 - (e) Explain application of clustering.
- 5. Attempt any TWO of the following : 12**
- (a) Explain schemas
 - (1) Star
 - (2) Snowflake
 - (3) Fact constellations
 - (b) Explain with suitable example data warehouse implementation.
 - (c) Explain what is Data preprocessing & why it is required.
- 6. Attempt any TWO of the following : 12**
- (a) Describe the process for Efficient processing of OLAP Queries.
 - (b) Explain task of Data preprocessing with example.
 - (c) Explain Apriori Algorithm with example.
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