



Paper ID : 250424

Roll No:

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**MBA**  
**(SEM IV) THEORY EXAMINATION 2024-25**  
**BUSINESS DATA WAREHOUSING & DATA MINING**

**TIME: 3 HRS**

**M.MARKS: 100**

**Note:** Attempt all Sections. In case of any missing data; choose suitably.

**SECTION A**

**1. Attempt all questions in brief.**

**2 x 10 = 20**

Q no.	Question
a.	What are the major components of a Data Warehouse?
b.	Differentiate between Database and Data Warehouse.
c.	What is a Data Cube in the context of multidimensional modeling?
d.	Define OLAP tools and mention any two functionalities.
e.	Mention the role of data mining in customer profiling.
f.	Define Data Cleaning and its importance in preprocessing.
g.	What is the role of Aggregation in data visualization?
h.	What is clustering? Give an example from marketing.
i.	Write short notes on Temporal Data Mining.
j.	Mention any two applications of data mining in the financial sector.

**SECTION B**

**2. Attempt any three of the following:**

**10 x 3 = 30**

a.	Explain the difference between ROLAP, MOLAP, and HOLAP. Discuss their advantages and limitations.
b.	Describe the ETL process in detail with an example of each phase.
c.	Explain the KDD process. How is it related to business intelligence?
d.	Discuss the various methods of Data Reduction. How do they improve performance in mining large data sets?
e.	Compare and contrast Classification and Clustering with appropriate business examples.

**SECTION C**

**3. Attempt any one part of the following:**

**10 x 1 = 10**

a.	Explain the Star Schema with a neat diagram. Compare it with the Snowflake Schema.
b.	What is metadata? Discuss the different classifications of metadata in the context of data warehousing.

**4. Attempt any one part of the following:**

**10 x 1 = 10**

a.	Describe the use of OLAP operations such as Roll-up, Drill-down, Slice, and Dice.
b.	Discuss the security and backup considerations in Data Warehousing systems.

**5. Attempt any one part of the following:**

**10 x 1 = 10**

a.	Explain Data Integration and Data Transformation techniques used in preprocessing.
b.	What is the importance of Data Compression in Data Warehousing? Describe two methods.

**6. Attempt any one part of the following:**

**10 x 1 = 10**

a.	Describe the Apriori algorithm with an example. How association rules are generated using this technique?
b.	Explain the concept of Target Marketing and Risk Management using data mining techniques.

**7. Attempt any one part of the following:**

**10 x 1 = 10**

a.	Explain how Decision Trees are used in classification with a suitable business case.
b.	Write a brief note on the role of tools such as SAS and KNIME in data mining projects.