

**BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)**  
**Computer Science & Engineering-AI&ML**  
**B. Tech. Sem - IV :SUMMER : 2023**  
**SUBJECT : ITC-II: DATA WAREHOUSING & MINING**

Day : Friday

Time : 10:00 AM-01:00 PM

Date : 02-06-2023

S-23949-2023

Max. Marks : 60

**N.B.**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data, if necessary.

- Q.1** Explain Data Warehousing and ETL operations. **(10)**  
**OR**  
Compare OLTP and OLAP.
- Q.2** List and explain various OLAP operations with neat and clean diagram. **(10)**  
**OR**  
Differentiate between OLAP system and statistical database.
- Q.3** Differentiate between ROLAP and MOLAP. **(10)**  
**OR**  
Write the design Approaches to build a Data Warehouse.
- Q.4** Explain KDD process in details with example. **(10)**  
**OR**  
Explain CRISP model in data mining.
- Q.5** Explain Simple Linear Regression with example. **(10)**  
**OR**  
Explain the steps of Apriori Algorithm.
- Q.6** What is K-means algorithm? Explain with proper example. **(10)**  
**OR**  
Explain outliers detection methods in details.

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