

**BACHELOR OF SCIENCE (COMPUTER SCIENCE) (CBCS - 2016 COURSE)**  
**S.Y.B.Sc.(Computer Science) Sem-III : WINTER- 2022**  
**SUBJECT : DATA WAREHOUSING & DATA MINING-I**

Day : Thursday

Time : 10:00 AM-01:00 PM

Date : 22-12-2022

**W-14890-2022**

Max. Marks : 60

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
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**Q.1** Answer **ANY TWO** of the following: **[12]**

- a) What is ETL in data warehouse? Explain the ETL process in detail.
- b) What is metadata? Explain the different types of metadata stored in Data Warehouse.
- c) Explain fact constellation schema with suitable example.

**Q.2** Answer **ANY TWO** of the following: **[12]**

- a) Explain the architecture of Data warehouse in detail with a neat diagram.
- b) Explain star and snowflake schema with suitable example.
- c) What is DBMS? Explain DBMS operations.

**Q.3** Answer **ANY TWO** of the following: **[12]**

- a) Compare OLAP and OLTP system.
- b) Explain data mining functionalities in detail.
- c) What do you mean by aggregate functions in SQL? Explain any four aggregate functions with suitable example.

**Q.4** Answer **ANY THREE** of the following: **[12]**

- a) What is Data marts? Explain different types of data marts.
- b) Why do many enterprises need a data warehouse?
- c) Write a note on advantages of Hybrid OLAP.
- d) Write a note on Decision Support System (DSS).

**Q.5** Answer **ANY FOUR** of the following: **[12]**

- a) Differentiate between classification and clustering data mining techniques.
- b) What are the steps of data pre-processing?
- c) Give a syntax and example of create statement in SQL.
- d) Write a short note on Database Users.
- e) State the features of network data model.
- f) Define the following terms: **i)** Data staging area      **ii)** Data cube

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