GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED– SEMESTER - VII EXAMINATION- SUMMER-2023

Subject Code: 4470622   **Date: 21/06/2023**
Subject Name: Data Warehousing
Time: 02:30 PM TO 05:00 PM   **Total Marks: 70**

Instructions:
  1. Attempt all questions.
  2. Make Suitable assumptions wherever necessary.
  3. Figures to the right indicate full marks.
  4. Use of simple calculators and non-programmable scientific calculators are permitted.

Q.1 **(a)** Explain the following terms: 07
  1. Data mart
  2. Granularity
  3. ETL
  4. Metadata
  5. Compound key
  6. click stream data
  7. Operational Data Store

(b) What is data warehouse? Explain the salient features of data warehouse in brief.   07

Q.2 **(a)** Suppose that a data warehouse consists of the three dimensions time, doctor, and patient, and the two measures rental fee and late charge, where late charge is the fee that a doctor charges a patient for a visit. Design Star schema model   07

(b) What are profile records? Explain the concept of creating multiple profile records along with appropriate example.   07

OR

(b) Explain various data structures found in a data warehouse in detail.   07

Q.3 **(a)** Explain OLAP operations in detail with example.   07
(b) Explain the physical design techniques that are especially relevant to the data warehouse environment.   07

OR

Q.3 **(a)** Explain the concepts of variable-length data, lock management, index-only processing and fast restore in the context of data warehouse.   07
(b) Write a short note on midlevel data model.   07

Q.4 **(a)** Explain the terms "Corporate Data Model", "Operational Data Model", and "Data Warehouse Data Model".   07
(b) Explain the issues related to placement of operational data into the data warehouse.   07

OR

Q.4 **(a)** Explain the process of planning for granularity of data in the data warehouse.   07
(b) What is data visualization? Explain structured and unstructured data visualization in brief.   07

Q.5 **(a)** What do you mean by independent data mart? State its advantages and disadvantages.   07
(b) Explain the terms "Exploration Warehouse" and "Data Mining Warehouse" in detail.   07

OR

Q.5 **(a)** What is multidimensional model? Explain the snowflake structure in detail.   07
(b) What is EIS? State the uses of EIS.   07

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