



V SEMESTER B.TECH. (COMPUTER SCIENCE & ENGINEERING)

MAKE-UP EXAMINATIONS, JAN 2017

SUBJECT: Business Intelligence and Applications [CSE 4024]

REVISED CREDIT SYSTEM

03/01/2017

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitable assumed.
- ❖ Draw diagrams wherever applicable.

- 1A.** What are the solutions to storage challenges of Unstructured Data? **2M**
- 1B.** For the following OLAP cube below (Fig 1.1), which shows Sale figure of various components for different cities across three years, perform the following OLAP operations & show resultant cube:
- i) Slice the cube for year: 2004 **1M**
 - ii) Dice the cube for year: 2004 and City: Delhi and Pune **1M**
 - iii) Roll-Up the cube for years (Assume unavailable values) **1M**
 - iv) Pivot **2M**

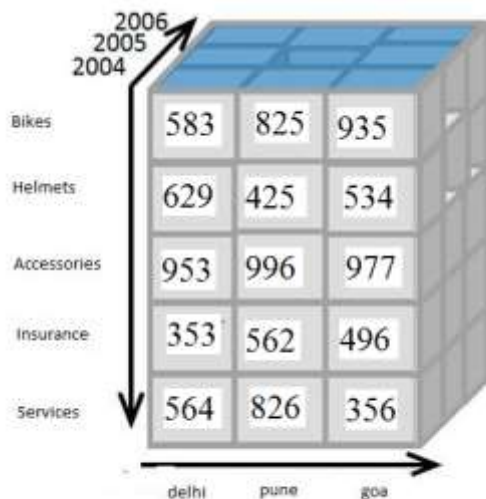


Fig 1.1

- 1C.** Should OLAP be performed on the operational databases? Why? **3M**

- 2A.** What is i) Dresner's definition for Business Intelligence? **3M**
 ii) Single Version of Truth? Give an example.
- 2B.** With a neat diagram of BI component framework, describe Business Layer along with its components **4M**
- 2C.** Distinguish between different Types of BI Users. **3M**
-
- 3A.** Describe Kimball's and Inmon's approach to data warehousing. Draw required diagram(s). **3M**
- 3B.** Explain the goals of a Data warehouse. **4M**
- 3C.** Draw the diagram of intermediate stages of ETL and explain the same. **3M**
-
- 4A** Every book has a title, isbn, year and price. The store also keeps the data of author and publisher for any book. **5M**
- For authors, the database keeps the name, address and the URL of their homepage. For publishers, the database keeps the name, address, phone number and the URL of their website.
 - The store has several warehouses, each of which has a code, address and phone number. The warehouse stocks several books. A book may be stocked at multiple warehouses.
 - The database records the number of copies of a book stocked at various warehouses.
 - The bookstore keeps the name, address, email-id, and phone number of its customers.
 - A customer owns several shopping basket. A shopping basket is identified by a basketID and contains several books.
 - Some shopping baskets may contain more than one copy of the same book. The database records the number of copies of each book in any shopping basket.
- Design an ER diagram for such a bookstore.
- 4B.** With an example for each, describe Star and Snowflake Schema **3M**
- 4C.** Define with an example: **2M**
- i) Data ii) Measure iii) Metric iv) Index
-
- 5A.** Describe the different steps involved in creating a Dashboard. Give example for each. **4M**
- 5B.** With a neat diagram, explain the four Perspectives of Balanced Scorecard **4M**
- 5C.** Discuss all the different types of containers used in control flow of SSIS **2M**