

Total No. of Questions : 12]

SEAT No. :

P810

[Total No. of Pages : 3

[4659] - 223

B.E. (Information Technology) (Semester - II)

BUSINESS INTELLIGENCE

(2008 Pattern) (Elective - IV)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates :

- 1) *Answer 3 questions from Section - I and three questions from Section - II.*
- 2) *Answers to the two sections should be written in separate books.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Figures to the right indicate full marks.*
- 5) *Assume suitable data, if necessary.*

SECTION - I

- Q1)** a) Explain usage of data warehouse in retail sales system. **[8]**
b) Data warehouse is the heart of a good BI application. Explain the characteristics of a data warehouse system and how data marts fit into the system. **[8]**

OR

- Q2)** a) How is an OLTP system useful in an organization? What are its applications? **[8]**
b) What is Data warehouse? How data warehouse is used in Insurance, Telecommunication and Transport Industries. **[8]**

- Q3)** a) Explain transaction and recurring snapshot types of dimensional modeling. Highlight two main differences between these two modeling types. **[8]**
b) What is the significance of Star schema and Snowflake schema? Explain with examples each one of them. **[8]**

OR

- Q4)** a) DW has one dimension called 'Product' with attributes like Product_ID, Product_Name, Product_Category. The product ice cream has Product_ID = 15, Product_Name="Ice Cream" and Product_Category="Dairy". On 1st Apr 2014 the product category of ice cream is changed to "Cold Storage" Elaborate 3 ways to handle this scenario. **[10]**

P.T.O.

- b) Explain Partitioning. Why we need to partition. Explain the criteria for Partitioning. [6]

Q5) a) How are following scenarios handled in the ETL process: [8]

- i) NULL values are present in the Operation Data Source
- ii) Multiple abbreviations for the same value e.g. Pune is represented as PUN, POONA, Pune etc in Operational Data Source.

b) Explain following data transformation terms [10]

- i) Data profiling
- ii) Data Analysis
- iii) Cleansing
- iv) Enrichment
- v) Householding

OR

Q6) a) What are late arriving facts? Give 2 examples and explain how to handle late arriving facts. [6]

b) Explain measures of data quality [6]

c) Explain the following term [6]

- i) Data Marts
- ii) Cubes

SECTION - II

Q7) a) Explain following terms with respect to OLAP: [10]

- i) Slicing and dicing
- ii) Drill up and drill down
- iii) Multi dimensions
- iv) Sparse data

b) Explain different levels of securities implemented in DW applications. Explain report level security in details. [6]

OR

- Q8)** a) Explain reporting architecture with suitable diagram. [8]
b) Compare OLTP Vs OLAP [8]
- Q9)** a) Compare Data Mining Vs Text mining [5]
b) Explain any one method of hierarchical clustering with an example. [6]
c) Given the data from the stock market it needs to be predicted that how a particular stock will perform in future. Which analysis technique can be used? Justify. [5]

OR

- Q10)**a) List different statistical techniques for data analysis. Explain any one of them. [8]
b) Given a set of input dataset of experience in year, education, and corresponding salary the person is getting. If user wants to know how much salary he can earn with the experience and education that he is having, which method of data analysis needs to be used? Justify your answers. [8]
- Q11)**a) Explain technologies that support real-time analytics. [9]
b) What are the requirements for setting up such a real-time BI system?[9]

OR

- Q12)**a) How does the real-time BI system impact the performance of other related systems depending on it?. [9]
b) What is BIG Data? List different technologies available for supporting BIG data. [9]

