Total No of Questions: [12] *SEAT NO. :* [ ]

[Total No. of Pages : 2]

BE – IT (Semester-II)
414451: Elective IV – BUSINESS INTELLIGENCE
(2008 Course)

Time: 3 Hours *Max. Marks : 100*

Instructions to the candidates:

1) *Answers to the two sections should be written in separate answer books.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right side indicate full marks.*
4) *Assume Suitable data if necessary*

SECTION I

Q1) a) What are the major building blocks of a data warehouse system? Explain each one of those with a neat and clean diagram [08]

b) Explain Structured and unstructured data. How data warehouse is used in Insurance and Telecommunication Industries. [08]

OR

Q2) a) Compare and contrast OLTP and DW with example. [08]

b) Explain Subject Orientation and Application Orientation in data warehouse. Give example. [08]

Q3) a) Explain transaction and recurring snapshot types of dimensional modeling. Highlight two main differences between these two modeling types. [08]

b) What is Dimensional Table? Explain confirmed dimensions and slowly changing dimensions.(Give Examples) [08]

OR

Q4) a) Write a short notes on 1) Star Schema 2) Snowflake Schema [08]

b) List out the important characteristics of a dimension table. Describe the same for a retail industry that has multiple stores in different parts of the country. The design should include at least 1 fact table and 2 dimension tables. [08]

Q5) a) Explain the following terms 1) Data Extraction and Cleansing 2) Data Scrubbing 3) Cubes [09]

b) What is data Staging? Explain it's pros and cons. [06]

c) In designing a ETL system architecture what are the advantages of an in-house system development versus existing off-the-shelf tools [03]

OR

Q6) a) What are the common data anomalies encountered during ETL process? How are the typically handled? [09]

b) Explain Data transformation process with Example. [09]

SECTION - II

Q7) a) What is an OLAP system? Explain the major operations that are performed on a data cube with an example and a diagram (hint: operations are slicing, dicing, drill down, roll up, pivoting) [10]

b) Compare Data Mining Vs Text Mining [06]

OR

Q8) a) Explain Reporting Architecture with suitable diagram [08]

b) How is an OLTP system useful in an organization? What are its applications? [08]

Q9) a) Explain security issues concerned with reporting. [08]

b) Explain the following 1)Data Visualization 2)Cluster Analysis [08]

OR

Q10) a) There are 2 sets of data mining algorithms - supervised and unsupervised. Elaborate the major difference between the 2. Clustering is one of them. Is it supervised or unsupervised? Why? Explain any one technique that is used for clustering numeric data. [10]

b) List different statistical techniques for data analysis. Explain any one of them. [06]

Q11 a) What is BIG data? List different technologies available for supporting BIG data. [08]

b) How does the real-time BI system impact the performance of other related systems depending on it? What are the requirements for setting up such a real-time BI system? [10]

OR

Q12 a) What is Cloud BI? [02]

Write a short notes on following [16]

1) Real time BI
2) Operational BI
3) Embedded BI
4) Agile BI .