B.TECH.
(SEM V) THEORY EXAMINATION 2022-23
BUSINESS INTELLIGENCE AND ANALYTIC

Time: 3 Hours *Total Marks: 100*

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. **Attempt *all* questions in brief.** **2 x 10 = 20**

   (a) What are the limitations of mathematical modeling?
   (b) What are the various factors that influence a rational choice while making decision in problem solving?
   (c) Define evolution and deviation analysis.
   (d) What does OLTP & OLAP stands for?
   (e) Why Data Validation is used for ?
   (f) IS PCS used for data reduction?
   (g) What are the 4 types of business analytics?
   (h) What are the types of variables in a dataset?
   (i) What is data repository?
   (j) When should a formal root cause analysis be conducted?

SECTION B

2. **Attempt any *three* of the following:** **10x3 = 30**

   (a) Draw and explain business intelligence architecture.
   (b) Explain the different types of Data Mart. Also define fact table and mapplet.
   (c) What are the different tools used for data validation? What are the important steps of data validation?
   (d) Explain Monte Carlo and Regression analysis in detail.
   (e) When should company adopt complex event processing and when should a company adopt business activity monitoring?

SECTION C

3. **Attempt any *one* part of the following:** **10x1 = 10**

   (a) How does the business intelligence architecture influence business intelligence purpose?
   (b) What are the different factors responsible for successful BI projects, briefly explain.

4. **Attempt any *one* part of the following:** **10x1 = 10**

   (a) How Star and Snowflake schemas are different with each other? Explain with the help of suitable example.
   (b) What are the different steps of ETL process? How ETL process is useful in data warehousing?

5.   **Attempt any *one* part of the following:**   **10x1 = 10**

   (a)   What is the function to find the day of the week for a particular data value?
   (b)   What is Data validation? How it works and why it is important?

6.   **Attempt any *one* part of the following:**   **10x1 = 10**

   (a)   How do you determine the accuracy of an iris dataset?
   (b)   What are different data mining techniques and how business uses them?

7.   **Attempt any *one* part of the following:**   **10x1 = 10**

   (a)   How does a business glossary related to metadata management?
   (b)   With the help of suitable example tell hoe complex event processing and business activity monitoring can actually benefits a company.