

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

B. Tech-VI Semester (IT/BT/BI)

**COURSE CODE (CREDITS):** 18B11CI613/ 18B1WBI632 (3)

**MAX. MARKS:** 15

**COURSE NAME:** Data Mining

**COURSE INSTRUCTORS:** Dr. Aman Sharma

**MAX. TIME:** 1 Hour

---

*Note: (a) All questions are compulsory.*

*(b) Marks are indicated against each question in square brackets.*

*(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems*

---

**Q1.** Consider a case study scenario where you are leading a Knowledge Discovery in Databases (KDD) process for a large e-commerce company aiming to enhance customer retention and increase sales. Write the challenges and propose strategies at each stage of the KDD process. **[4 Marks, CO-1]**

**Q2.** Explain how data mining techniques can be utilized within the realm of Business Intelligence (BI) to provide valuable insights and drive decision-making processes. Provide a specific example of how a retail company could leverage data mining to improve its operations and competitiveness. **[3 Marks, CO-2]**

**Q3.** You have a dataset containing the following three data points in two dimensions:

(2,3),(4,5),(6,7)(2,3),(4,5),(6,7)

Perform Principal Component Analysis (PCA) on this dataset to reduce its dimensionality to one principal component. Compute the principal component score for each data point. **[4 Marks, CO-3]**

**Q4.** Write different modeling data warehouses: dimensions & measures along with suitable example. **[4 Marks, CO-2]**

\*\*\*\*\***Best of Luck**\*\*\*\*\*