Paper ID : 250133

**Roll No:**

## BTECH
## (SEM VIII) THEORY EXAMINATION 2024-25
## DATA WAREHOUSING & DATA MINING

**TIME: 3 HRS**  **M.MARKS: 100**

**Note:** Attempt all Sections. In case of any missing data; choose suitably.

### SECTION A

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

| Q No. | Question | CO | Level |
|---|---|---|---|
| a. | Explain Discretization. | 3 | K1 |
| b. | Discuss issues to consider during data integration | 3 | K1 |
| c. | Explain the working of Artificial Neuron. | 4 | K1 |
| d. | Explain support and confidence in Association rule mining | 4 | K2 |
| e. | Explain Pivot operation in OLAP. | 1 | K2 |
| f. | Define Information Gain. | 4 | K1 |
| g. | Define Data warehouse. | 1 | K1 |
| h. | Explain Outlier Analysis. | 3 | K1 |
| i. | What does negative, positive and zero Value Correlation coefficient indicates? | 3 | K2 |
| j. | Explain Binning method for dealing with noisy data. | 3 | K1 |

### SECTION B

**2.**  **Attempt any *three* of the following:**  **10 x 3 = 30**

| Q No. | Question | CO | Level |
|---|---|---|---|
| a. | Explain three-tier data warehousing architecture. | 2 | K1 |
| b. | Compare OLTP and OLAP Systems. | 1 | K1 |
| c. | Discuss Snowflakes, and Fact Constellations Schemas for Multidimensional Data Models | 1 | K1 |
| d. | Explain the following<br>i. Enterprise Warehouse<br>ii. Data Mart | 2 | K1 |
| e. | Explain the Non linear separability using EX-OR functionality in Neural Network | 4 | K2 |

### SECTION C

**3.**  **Attempt any *one* part of the following:**  **10 x 1 = 10**

| Q No. | Question | CO | Level |
|---|---|---|---|
| a. | Explain Laplacian correction to avoid computing probability values of zero in Naïve Bayesian Classifier with example | 4 | K3 |
| b. | Explain Top- down and Bottom-up approach for Hierarchical Clustering | 4 | K2 |

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**4.**   **Attempt any *one* part of the following:**                    **10 x 1 = 10**

| Q No. | Question | CO | Level |
|-------|----------|----|----|
| a. | Explain K-mean Clustering Algorithm with it's Limitations | 4 | K2 |
| b. | Explain DBSCAN Clustering algorithm | 4 | K2 |

**5.**   **Attempt any *one* part of the following:**                    **10 x 1 = 10**

| Q No. | Question | CO | Level |
|-------|----------|----|----|
| a. | Explain The following<br>iii.  Spatial Mining<br>iv.  Temporal Mining | 5 | K2 |
| b. | Explain the following<br> i. Regression<br> ii. Normalization | 3 | K2 |

**6.**   **Attempt any *one* part of the following:**                    **10 x 1 = 10**

| Q No. | Question | CO | Level |
|-------|----------|----|----|
| a. | Explain the Following<br>i. various measures to calculate the central tendency of Data<br>ii. Standard deviation and Variance. | 3 | K2 |
| b. | Explain  Decision tree with a suitable example | 4 | K2 |

**7.**   **Attempt any *one* part of the following:**                    **10 x 1 = 10**

| Q No. | Question | CO | Level |
|-------|----------|----|----|
| a. | Explain web content mining and web structure mining. | 5 | K2 |
| b. | Differentiate  ROLAP, MOLAP and HOLAP Server Architectures | 5 | K2 |