R-23 **Code: 23A05504d**

B.TECH. DEGREE EXAMINATION, MODEL PAPER, 2025

III B.Tech I Semester

DATA WAREHOUSING AND DATA MINING

Computer Science and Engineering

Time: 3Hrs Max. Marks: 70

PART-A

(Compulsory Questions)

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1. **Answer the following (10X02=20 Marks)**

(a) List the characteristics of OLAP systems.
(b) What are the application areas of data mining?
(c) What is the difference between Knowledge discovery and data mining?
(d) Write any four advantages of data cleaning.
(e) Describe the data transformation?
(f) Why Frequent Patterns are important in Data Mining?
(g) Define Bayesian Classification?
(h) Identify the purpose of Rule Based Classification.
(i) What is WEKA TOOL? How does it works?
(j) List the advantages of WEKA Explorer.

PART-B

*Answer **ONE** question from each Unit (5X10=50 Marks)*

UNIT - I

2. (a) What is Data Model? Discuss briefly about Multidimensional Data Models?.
(b) Explain type of various Data Warehouse Schemas for Decision Support.

(OR)

3. (a) Define Data Warehousing. Write the procedure to build a Data Warehouse with a neat sketch.
(b) Discuss various OLAP Operations.

UNIT - II

4. (a) Describe the steps involved in Data Mining when viewed as a process of Knowledge Discovery. And Illustrate Major issues in Data Mining.
(b) Illustrate Major issues in Data Mining.

(OR)

5. (a) Discuss Basic Statistical Description of Data.
(b) Discuss various steps involved in Data Preprocessing (Cleaning, Integration, Reduction, and Transformation).

UNIT – III

6. (a) How different patterns are Mined in Data Mining Process to get Association and Correlations by using Market Bucket Analysis.

   (b) Discuss about Constraint based frequent pattern mining.

(OR)

7. (a) Discuss the Pattern Evaluation Method.

   (b) Discuss about Apriori Algorithm based on Transactional data for all electronics branch Illustrate

TID	items
T1	I1, I2 , I5
T2	I2,I4
T3	I2,I3
T4	I1,I2,I4
T5	I1,I3
T6	I2,I3
T7	I1,I3
T8	I1,I2,I3,I5
T9	I1,I2,I3

UNIT – IV

8. (a) Explain support vector machines and Lazy Learners.

   (b) Suppose the data for clustering {1, 3, 5, 15, 33, 11, 25}. Consider k=2, cluster the given data using k-means clustering algorithm.

(OR)

9. (a) Explain Density Based Methods in cluster analysis.

   (b) What is Outlier Analysis? Explain Outlier detection Methods.

UNIT – V

10. (a) What is WEKA TOOL? List out the applications and advantages.

    (b) Discuss in detail about Getting started, Exploring from WEKA Explorer

(OR)

11. (a) Explain Clustering algorithms in WEKA Explorer

    (b) Briefly Explain about Association – rule learners From WEKS Explorer.