Course Code: 23CS5T01

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)

III - B.Tech I-Semester Regular Examinations (BR23), Nov/Dec - 2025

DATA WAREHOUSING AND DATA MINING (CSE)

Time: 3 hours Max. Marks: 70

Question Paper consists of Part-A and Part-B
*Answer **ALL** the question in **Part-A and Part-B***

PART–A (10X2 = 20M)

		Marks	CO	BL
1. a)	Differentiate between OLTP and OLAP?	(2M)	CO1	BL2
b)	Define Data Warehouse and Data Cube?	(2M)	CO1	BL1
c)	What is the need of Data Preprocessing?	(2M)	CO2	BL2
d)	Define Data Transformation?	(2M)	CO2	BL1
e)	What is Decision Tree Induction?	(2M)	CO3	BL1
f)	State Bayes Theorem in classification?	(2M)	CO3	BL1
g)	Define Frequent Itemset?	(2M)	CO4	BL1
h)	Define Support and Confidence in Association Rule Mining?	(2M)	CO4	BL2
i)	Write any two applications of Clustering?	(2M)	CO5	BL3
j)	Differentiate between Supervised and Unsupervised learning?	(2M)	CO5	BL2

PART–B (5X10 = 50M)

2a.	Which Technologies Are Used in Data Mining ? What Kinds of Patterns Can Be Mined?	05M)	CO1	BL2
b.	What is Data mining give a step in the process of knowledge discovery	05(M)		BL1
	(OR)			
3a.	Explain OLAP operations with examples	05(M)	CO1	BL3
b.	Discuss Star, Snowflake, and Fact Constellation schemas with neat diagrams detail.	05(M)		BL4

4a.	Demonstrate Data Pre-processing Techniques to process raw data t and to make it suitable for Data mining	05(M)	CO2	BL3
b.	Explain data Transformation and Data Discretization by binning Methods and normalization methods	05(M)		BL4
	(OR)			
5.	Discuss Data Transformation and Data Reduction issues to consider to data mining	10(M)	CO2	BL4

6a.	Discuss Bayesian Classification and Naïve Bayes method with an example.	05(M)	CO3	BL3
b.	Discuss Model Evaluation metrics (Accuracy, Precision, Recall, F1-score)	05(M)		BL4
	(OR)			
7a.	Explain Decision Tree Induction with attribute selection measures.	05(M)	CO3	BL3
b.	Discuss Tree Pruning and Scalability issues in Decision Tree Induction	05(M)		BL4

8.	Explain the Apriori Algorithm with an example transaction database. Write notes on limitations of Apriori.	10(M)	CO4	BL3
	(OR)			
9a.	Explain FP-Growth Algorithm in detail with example	05(M)	CO4	BL3
b.	Explain Rule Generation with confidence-based pruning	05(M)		BL4

10a	Explain K-means clustering algorithm with an example. Data set	05(M)	CO5	BL3
b.	Explain Agglomerative Hierarchical Clustering with example	05(M)		BL3
	(OR)			
11.	Discuss DBSCAN clustering algorithm with strengths and weaknesss.	10(M)	CO5	BL4

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