Course Code: 23CS5T01

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)

III - B.Tech I-Semester Supplementary Examinations (BR23), Mar/Apr - 2026

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	BL2
1. a)	What is knowledge data discovery?	(2M)	CO1	BL3
b)	Differentiate between OLTP and OLAP	(2M)	CO1	BL2
c)	Define data warehouse	(2M)	CO2	BL1
d)	What is the need for Data Preprocessing	(2M)	CO2	BL2
e)	What is Entropy in Decision Tree learning?	(2M)	CO3	BL2
f)	State Bayes Theorem in classification.	(2M)	CO3	BL2
g)	Define Association Rule.	(2M)	CO4	BL2
h)	What is Support in Association Rule Mining?	(2M)	CO4	BL3
i)	Differentiate between supervised and unsupervised learning?	(2M)	CO5	BL3
j)	List out the types of Clustering methods	(2M)	CO5	BL2

PART–B (5X10 = 50M)

2a.	Explain the key technologies used in data mining and outline the different categories of patterns that can be discovered.	5(M)	CO1	BL2
b.	Explain Data Warehouse architecture and discuss the need for OLAP in decision support systems.	5(M)		BL3
	(OR)			
3a.	Explain Data Cube operations Roll-up, Drill-down, Slice, Dice and Pivot with illustrations.	5(M)	CO1	BL3
b.	Discuss star, snowflake and fact constallation schemas in detail with neat diagrams.	5(M)		BL4
4.	Discuss data preprocessing methods in detail with suitable examples	10(M)	CO2	BL4
	(OR)			
5.	Explain the key challenges involved in data transformation and data reduction when preparing data for mining.	10(M)	CO2	BL4
6.	Explain Bayesian Classification and demonstrate the Naïve Bayes method using a suitable example and also state strengths and limitations of it.	10(M)	CO3	BL4
	(OR)			
7a.	Explain how Decision Tree Induction works and illustrate the role of attribute selection measures with suitable examples	5(M)	CO3	BL3

b.	Explain about Rule-Based classification	5(M)		BL3
8.	Explain the Apriori algorithm and demonstrate its working using a sample transaction database. Also discuss the major limitations of the Apriori approach.	10(M)	CO4	BL3
	(OR)			
9a.	Explain the FP-Growth algorithm and illustrate its working with a detailed example.	10(M)	CO4	BL3
				BL3
10a	Explain the K-means clustering algorithm and outline its working with a simple dataset.	5(M)	CO5	BL3
b.	What is hierarchical clustering? Explain dendrogram representation for clustering of data Objects.	5(M)		BL4
	(OR)			
11	Describe the DBSCAN algorithm and critically evaluate its strengths and limitations	10(M)	CO5	BL5

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