Course Code: D251BA02

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE(**AUTONOMOUS**)

I –M. Tech I-Semester Regular Examinations (BR25), Feb - 2026

Advanced Dataware housing and Data Mining

Time: 3 hours Max. Marks: 60

Answer any Five Questions One Question from One UNIT
ALL the Questions Carry Equal Marks

	UNIT-I	**Marks**	**CO**	**BL**
1.a)	Discuss OLAP operations and their role in decision support systems.	6M	CO1	2
b)	Describe Data Warehouse modeling techniques with suitable examples	6M	CO1	2
	OR			
2.	A multinational retail company maintains sales data across multiple regions in separate databases. Management wants a unified view for strategic decision-making. (a) Propose a suitable Data Warehouse architecture (b) Explain how OLAP helps management analyze regional performance	12M	CO1	4

	UNIT-II	**Marks**	**CO**	**BL**
3.a)	Given the dataset: {5, 10, 10, 15, 20} Calculate Mean, Median, Mode, and Range.	6M	CO2	3
b)	Explain data cleaning techniques used in preprocessing.	6M	CO2	3
	OR			
4.a)	Demonstrate different statistical measures used to summarize data.	6M	CO2	2
b)	Explain different types of data attributes and objects with examples.	6M	CO2	3

	UNIT-III	**Marks**	**CO**	**BL**
5.a)	Explain over-fitting and pruning in decision trees.	6M	CO3	3
b)	Given TP=50, FP=10, FN=5, TN=35, calculate Precision, Recall, and Accuracy.	6M	CO3	3
	OR			
6.a)	Explain how Bayesian classifiers can be applied and evaluated.	6M	CO3	5
b)	Explain Rule-Based Classification Method?	6M	CO3	3

	UNIT-IV	**Marks**	**CO**	**BL**
7.a)	Discuss FP-Growth algorithm in detail.	6M	CO4	2
b)	Explain frequent itemset generation using Apriori algorithm.	6M	CO4	2
	OR			
8.a)	Given transaction data and minimum confidence of 60%, generate valid association rules.	6M	CO4	5

b)	Describe association rule mining and its measures.	6M	CO4	3

	UNIT-V	Marks	CO	BL
9.a)	Explain K-Means clustering algorithm and its limitations.	6M	CO5	3
b)	Demonstrate Agglomerative Hierarchical Clustering with an example.	6M	CO5	3
	OR			
10.a)	Explain traditional density center-based approaches with strengths and weaknesses.	6M	CO5	3
b)	Explain DBSCAN algorithm with suitable example.	6M	CO5	4

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