Register No : _____

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL/MAY 2026

Third Semester

Master of Computer Applications

PMCE2420 - DATA MINING AND DATA WAREHOUSING TECHNIQUES

Regulations - 2024

Duration : 3 Hrs *Maximum : 100 Marks*

*PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)*

Q.No	*Questions*	*BTL*	*CO*	*Marks*
1.	Define data mining and its purpose.	L1	1	2
2.	Why data preprocessing is important in mining large datasets?	L2	1	2
3.	List any two measures used in association rule mining.	L1	2	2
4.	Interpret the need for data preparation in classification and prediction tasks.	L2	2	2
5.	Name two classification algorithms commonly used in data mining.	L1	3	2
6.	Summarize the differences between classification and regression.	L2	3	2
7.	What is Hierarchical Clustering?	L1	4	2
8.	Illustrate hierarchical clustering with an example.	L2	4	2
9.	Define Datawarehouse.	L1	5	2
10.	Compare the star schema and snowflake schema in data warehouse design.	L2	5	2

*PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)*

Q.No		*Questions*	*BLT*	*CO*	*Marks*
11.	a	Explain the steps in data preprocessing such as cleaning, integration, transformation, reduction, and discretization.	L2	1	16
		Or			
	b	Summarize the issues and challenges in data mining and discuss their impact on applications.	L2	1	16
12.	a	Illustrate the process of mining frequent item sets with candidate generation using a suitable example.	L2	2	16
		Or			
	b	Explain the key differences between classification and prediction in data mining.	L2	2	16
13.	a	Apply the decision tree method to a dataset and show how splitting criteria are used.	L3	3	16
		Or			
	b	Construct a Bayesian classifier for a dataset and describe how predictions are generated.	L3	3	16

14.	a	Develop the k-means algorithm for clustering a dataset and show the cluster assignment process.	L3	4	16
		Or			
	b	Solve a clustering problem using the EM algorithm by presenting the key computation steps.	L3	4	16
15.	a	Analyze the architecture of a data warehouse and identify the function of its main components.	L4	5	16
		Or			
	b	Distinguish between OLAP and OLTP systems by examining their features and applications.	L4	5	16