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PRESIDENCY UNIVERSITY

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Bengaluru

Mid Term Examinations - October 2026

Date: 06/10/2026 **Time:** 11:45 AM - 01:15 PM

Course Code: CSA1708 **Course Name:** Data Mining

Semester: Third/Fifth Semester **Max. Marks:** 50 **Weightage:** 50%

CO - Levels	CO1	CO2	CO3
Marks	48	44	88

PART A: Answer Following Questions. 10 M

Q.N.	Questions	M	CO	BT
1	How would you distinguish between data mining and data warehousing?	2	CO1	BT2
2	Identify two banking scenarios where data mining would add the most business value, and justify your choice	2	CO1	BT1
3	Classify the goals of data mining into two categories, giving one example for each.	2	CO2	BT2
4	Recall support and confidence in apriori algorithm.	2	CO3	BT1
5	Name techniques which are used to improve efficiency of apriori algorithms.	2	CO3	BT1

PART B : Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
6	Explain the concept of data mining with a neat diagram of the KDD process.	10	CO1	BT2
7	Discuss association rule mining with an example of market basket analysis.	10	CO1	BT2

PART C: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
8	Describe about classification as a data mining technique with a real-world example.	10	CO2	BT2
9	Portray about clustering as a data mining technique. How does it differ from association.	10	CO2	BT2

PART D: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
10	A bank surveys 100 customers to determine whether gender and preference for a banking product are related. **Product A Product B Total** Male 30 20 50 Female 20 30 50 **Total 50 50 100** Test at 5% significance level. Chi-square value at 5% is 3.841.	10	CO3	BT3

PTO (Please Turn Over)

11	Two customers have binary purchase profiles for five products: **Product A B** P1 1 1 P2 1 0 P3 0 1 P4 1 1 P5 0 0 Calculate: 1. M11 2. M10 3. M01 4. M00 5. Jaccard similarity 6. SMC	10	CO3	BT3

PART E: Answer Any 1 Following Questions. 10 M				
Q.N.	**Questions**	**M**	**CO**	**BT**
12	Consider: **TID Items** T1 A, B, C T2 A, B T3 A, C T4 B, C T5 A, B, C T6 A, B, C Minimum support = **50%** Minimum confidence = **70%** Find whether the rule: A→B is a strong association rule.	10	CO3	BT3
13	Consider: **TID Items** T1 A, B, C T2 A, B T3 A, C T4 B, C T5 A, B, C Minimum support count = 2. Construct the FP-tree.	10	CO3	BT3