Roll No: | | | | | | | | | | | |

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: CSD2002 **Course Name:** Introduction to Data Science

Semester: 3 Semester **Max. Marks:** 50 **Weightage:** 50%

CO - Levels	CO1	CO2
Marks	70	110

PART A: Answer Following Questions. 10 M

Q.N.	Questions	M	CO	BT
1	Define data and distinguish between data and information with one example each.	2	CO1	BT2
2	List any four core components of Data Science.	2	CO1	BT2
3	List any four applications of Data Science in healthcare.	2	CO1	BT2
4	Describe feature engineering? Give one example of creating a new feature.	2	CO2	BT2
5	Explain what is unstructured data? Give three examples.	2	CO2	BT2

PART B : Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
6	Discuss the applications of Data Science in any four domains (Healthcare, Finance, Retail, Social Media, Transportation or Agriculture) with specific use-cases.	10	CO1	BT2
7	Differentiate between Qualitative (Categorical) and Quantitative (Numerical) data. Explain nominal vs ordinal and discrete vs continuous data with examples.	10	CO1	BT2

PART C: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
8	Explain Data Science Lifecycle with activities and examples.	10	CO1	BT2
9	Explain 5V's of Big Data and provide examples for each V's	10	CO1	BT2

PART D: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
10	The following are the ages (in years) of 12 customers of an online store: 22, 25, 28, 24, 26, 27, 23, 29, 25, 30, 24, 85 Detect whether any observation is an outlier using the Z-score method with threshold $\|z\| > 3$.	10	CO2	BT3
11	Daily number of product returns received by a warehouse over 15 consecutive days: 4, 5, 6, 5, 7, 8, 6, 5, 9, 7, 6, 4, 5, 28, 7 Detect outliers using the IQR method .	10	CO2	BT3

PART E: Answer Any 1 Following Questions. 10 M				
Q.N.	**Questions**	**M**	**CO**	**BT**
12	Explain Data Transformation techniques: Normalization, Encoding (Label & One-Hot), and Feature Engineering with numerical examples.	10	CO2	BT3
13	Explain different methods to handle the Missing values in data science with an example for each method.	10	CO2	BT3