PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations – October 2025

Date: 30-10-2025   **Time:** 02.30Pm to 04.00Pm

School: SOIS-PG	**Program:** MCA	
Course Code : CSA4009	Course Name: Artificial Intelligence and Machine Learning	
Semester: III	**Max Marks**: 50	**Weightage**: 25%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	28	22	-	-	-

Instructions:

   (i) *Read all questions carefully and answer accordingly.*

   (ii) *Do not write anything on the question paper other than roll number.*

Part A

Answer ALL the Questions. Each question carries 2marks.   **5Q x 2M=10M**

1	What is a Rational Agent?	2 Marks	L2	CO1
2	Define Artificial Intelligence	2 Marks	L2	CO1
3	What do you mean by Data Privacy?	2 Marks	L2	CO1
4	What is standard deviation and how is it used in machine learning?	2 Marks	L2	CO1
5	What is data visualization?	2 Marks	L3	CO2

Part B

Answer the Questions.   **Total Marks 40M**

6.	a.	Differentiate between supervised and unsupervised learning with examples.	10 Marks	L2	CO1
		Or			
7.	a.	Explain the KNN algorithm with suitable examples	10 Marks	L2	CO1

8.	a.	Describe the steps in the machine learning process.	10 Marks	L2	CO1
		Or			
9.	a.	Explain Random Forest with suitable example.	10 Marks	L2	CO1

10.	a.	Explain the basic framework of machine learning with a neat diagram.	10 Marks	L3	CO2
		Or			
11.	a.	Explain the steps involved in hypothesis testing?	10 Marks	L3	CO2

12.	a.	Describe different techniques for handling missing values with examples	10 Marks	L3	CO2
		Or			
13.	a.	Explain the importance of data preprocessing in supervised ML. Discuss techniques for handling categorical, missing, and outlier data.	10 Marks	L3	CO2