PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – December 2025

Date: 11 – 12- 2025　　　　　　　　　　　**Time:** 09:30am – 12:30pm

School: SOIS	**Program:** BCA
Course Code: CSA1701	**Course Name:** Artificial Intelligence
Semester: III	**Max Marks**: 100 　　　　　**Weightage**:50%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks					

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.　　　　**10Q x 2M=20M**

1	Give one example of an AI application in agriculture	2 Marks	L1	CO1
2	Define frame structure in knowledge representation.	2 Marks	L1	CO1
3	Compare propositional logic and first-order logic.	2 Marks	L2	CO2
4	What is inference in First Order Logic?	2 Marks	L1	CO2
5	Define heuristic function in search.	2 Marks	L1	CO3
6	State one advantage and one disadvantage of BFS.	2 Marks	L1	CO3
7	What is reinforcement learning?	2 Marks	L1	CO4
8	List two real-world applications for AI in business.	2 Marks	L1	CO2
9	What is the state space in problem solving?	2 Marks	L1	CO4
10	Define an intelligent agent.	2 Marks	L1	CO1

Part B

Answer the Questions   **Total 80 Marks.**

11.	a.	Illustrate applications of AI in marketing domain	10 Marks	L2	CO1
	b.	Compare different types of agents with suitable examples.	10 Marks	L2	CO1

or

12.	a.	Explain the structure of an intelligent agent with neat diagram.	10 Marks	L2	CO1
	b.	Explain the functions of an intelligent agent with diagram.	10 Marks	L2	CO1

13.	a.	Explain knowledge-based agents and their role in AI systems.	10 Marks	L2	CO2
	b.	Apply propositional logic to represent a simple real-world scenario.	10 Marks	L2	CO2

or

14.	a.	Discuss the role of reasoning in AI. Differentiate between deductive and inductive reasoning.	10 Marks	L2	CO2
	b.	Demonstrate reasoning by example of forward and backward chaining.	10 Marks	L2	CO2

15.	a.	Describe the state space representation with an example.	10 Marks	L2	CO3
	b.	Apply BFS to solve the 8-puzzle problem (simplified version).	10 Marks	L3	CO3

Or

16.	a.	Differentiate between DFS and BFS with examples.	10 Marks	L2	CO3
	b.	Explain the working of A* algorithm with suitable example.	10 Marks	L3	CO3

17.	a.	Explain supervised, unsupervised, and reinforcement learning with examples.	10 Marks	L2	CO3
	b.	Apply reinforcement learning in a simple game-playing scenario.	10 Marks	L3	CO3

Or

18.	a.	Explain the concept of Linear Regression with an example.	10 Marks	L2	CO3
	b.	Discuss the role of Linear Regression in predictive modelling with example.	10 Marks	L3	CO3