Course Code: 24BC3T09

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)

II - BCA I-Semester Regular Examinations (BR24), Jan/Feb - 2026

ARTIFCIAL INTELLIGENCE (BCA)

Time: 3 hours | Max. Marks: 70

Question Paper consists of Part-A and Part-B
*Answer **ALL** the question in **Part-A and Part-B***

PART–A (10X2 = 20M)

		Marks	CO	BL
1. a)	Define Artificial Intelligence.	(2M)	1	1
b)	What is an intelligent agent?	(2M)	1	2
c)	Define Breadth First Search (BFS).	(2M)	2	1
d)	What is heuristic search?	(2M)	2	2
e)	What is knowledge representation?	(2M)	3	1
f)	Define predicate logic.	(2M)	3	2
g)	What is unification in AI?	(2M)	4	1
h)	Define Forward chaining.	(2M)	4	2
i)	What is reinforcement learning?	(2M)	5	1
j)	Define Decision Tree.	(2M)	5	2

PART–B (5X10 = 50M)

2a.	Explain in detail the working of AI problem solving agents.	10(M)	1	3
	(OR)			
3a.	Describe the concept of intelligent agents with suitable examples.	5(M)	1	2
b.	Explain the structure of an intelligent agent and its components.	5(M)		
4a.	Explain AO* Algorithm in detail with a neat diagram.	10(M)	2	3
	(OR)			
5a.	Define Depth First Search and list its advantages.	5(M)	2	3
b.	What is heuristic search? Explain with a simple example.	5(M)		
6a.	What is knowledge representation? List any four methods of it.	5(M)	3	3
b.	Define predicate logic and explain its basic elements	5(M)		
	(OR)			
7a.	What is a rule-based system? Explain its working with an example	10(M)	3	4
8a.	Explain First Order Logic (FOL) in detail.	10(M)	4	3
	(OR)			
9a.	What is first-order logic? State its advantages.	5(M)	4	4
b.	Define propositional logic and list its basic connectives.	5(M)		
10a.	Illustrate Resolution method in detail.	10(M)	5	3
	(OR)			
11a.	What is reinforcement learning? List its main components.	5(M)	5	3
b.	Define explanation-based learning and state its purpose.	5(M)		

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