SET 1

SR 22

St. Peter's Engineering College (Autonomous) Dullapally (P), Medchal, Hyderabad – 500100. II - Mid Term Examination – November 2024						Dept.	:	CSM
						Academic Year 2024-25		
Subject Code	:	**AS22-66PC01**	**Subject**	:	**INTRODUCTION TO ARTIFICIAL INTELLIGENCE**			
Class/Section	:	**B. Tech.**	**Year**	:	**II**	**Semester**	:	**II**
Duration	:	120 Min	**Max. Marks**	:	**30**	**Date:**	:	

BLOOMS LEVEL					
Remember	**L1**	**Understand**	**L2**	**Apply**	**L3**
Analyze	**L4**	**Evaluate**	**L5**	**Create**	**L6**

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PART – A (10x1M = 10M)

Note: Answer all Questions. Each Question carries equal marks.

Q. No	Question (s)	Marks	BL	CO
	UNIT - I			
1	**a.** What are the types of Intelligent Systems?	**1M**	L1	C221.1
	b. What is the space complexity of BFS Algorithm?	**1M**	L1	C221.1
	c. Define problem solving agent.	**1M**	L1	C221.1
	d. What is the time complexity of Bi-Directional search?	**1M**	L1	C221.1
	UNIT – II			
	e. State De Morgan's Laws.	**1M**	L2	C221.2
	f. What are types of Constraint Satisfaction Problems?	**1M**	L1	C221.1
	g. Define Alpha and Beta.	**1M**	L1	C221.1
	h. What are the Challenges in Optimal Decision-Making?	**1M**	L1	C221.1
	UNIT – III			
	i. Evaluate the given sentence "**All Pompians were Romans**" write a well-formed formula in predicate logic.	**1M**	L5	C221.5
	j. What is unification?	**1M**	L1	C221.1

PART – B (20M)

Q. No	Question (s)	Marks	BL	CO
	UNIT - I			
2	**a.** What are the types of AI agent? Explain them with neat diagram.	**4M**	L1	C221.1
	b. Explain Problem Solving Agents in brief.	**4M**	L1	C221.1
	OR			

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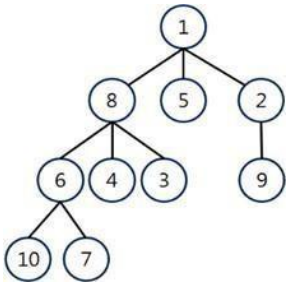
3	**a.** Discuss Breadth First Search Technique with the help of a given tree.  	**4M**	L5	C221.5
	b. Explain DFS with suitable example.	**4M**	L2	C221.2
	UNIT – II			
4	**a.** Explain Alpha Beta Pruning Algorithm with an Example.	**4M**	L2	C221.2
	b. Discuss about Constraint Satisfaction Problems (CSP).	**4M**	L1	C221.1
	OR			
5	**a.** Explain logical connectives with truth table in propositional logic?	**4M**	L1	C221.1
	b. Describe the Properties of Operators in Propositional Logic.	**4M**	L1	C221.1
	UNIT – III			
6	Explain inference rules for quantifiers?	**4M**	L1	C221.1
	OR			
7	Consider the following sentences: • **John likes all kinds of food** • **Applies are food** • **Chicken is food** • **Anything anyone eats and isn't killed by is food** • **Bill eats peanuts and is still alive** • **Sue eats everything Bill eats** i. Translate these sentences into formulas in predicate logic ii. Prove that john likes peanuts using backward chaining iii. Convert the formulas of a part into clause form Prove that john likes peanuts using resolution	**4M**	L5	C221.5

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