R22

ANURAG Engineering College
(An Autonomous Institution)
II B.Tech II Semester Regular Examinations, June/July – 2024
INTRODUCTION TO ARTIFICIAL INTELLIGENCE
(ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)

Time: 3 Hours **Max. Marks: 60**

Section – A (Short Answer type questions) (10 Marks)
Answer All Questions

		Course Outcome	B.T Level	Marks
1.	Define problem solving agent.	CO1	L1	1M
2.	What is simulated annealing search?	CO1	L1	1M
3.	What is inference?	CO2	L1	1M
4.	Define Horn clause.	CO2	L2	1M
5.	What is Resolution?	CO3	L1	1M
6.	What is First order logic?	CO3	L2	1M
7.	What is forwarded state space search?	CO4	L1	1M
8.	Explain classical planning in one sentence.	CO4	L1	1M
9.	Define Principal of Maximum excepted utility.	CO5	L2	1M
10.	State Baye's rule.	CO5	L2	1M

Section B (Essay Questions)
Answer all questions, each question carries equal marks. (5 X 10M = 50M)

			Course Outcome	B.T Level	Marks
11.	A)	Give an overview of different kinds of agent programs.	CO1	L3	10M
		OR			
	B)	i) What is bidirectional search? Explain in detail.	CO1	L2	3M
		ii) Explain Breadth First Search algorithm with an example.			7M
12.	A)	Demonstrate with an example the working of 'minimax' algorithm and explain alpha-beta pruning technique.	CO2	L3	10M
		OR			
	B)	i) What is Resolution? Explain Resolution algorithm for Proposition logic.	CO2	L3	5M
		ii) Explain backtracking searching technique.			5M
13.	A)	Represent the following sentences using first-order logic: i) One's mom is one's female parent. ii) One's husband is one's male spouse iii) Parent and child are inverse relations. iv) A grand parent is a parent of one's parent.	CO3	L2	10M
		OR			
	B)	i) Explain reasoning with default information.	CO3	L3	2M
		ii) Write simple forward chaining algorithm.			8M
14.	A)	Comment on the complexity of classical planning.	CO4	L3	10M
		OR			
	B)	i) Discuss regressive relevant state space search.	CO4	L3	5M
		ii) What is Graph Plan? Explain in detail.			5M
15.	A)	Explain relation probability models in FOL.	CO5	L3	10M
		OR			
	B)	Describe Bayesian networks in detail.	CO5	L2	10M