Reg. No.: .....

Name: .....

University of Kerala

Y7626

Fourth Semester FYUGP Degree Examination, May 2026

Discipline Specific Elective

COMPUTER SCIENCE

UK4DSECSC202/UK4DSECAP202 - Knowledge Representation and Intelligent Agents

Academic Level: 200-299

2024 Admission

Time: 1 Hour 30 Minutes(90 Mins.) **Max. Marks: 42**

Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark Each.Answer all questions

Qn No.	Question	CL	CO
1	An agent perceives through _____.	RE	4
2	State the meaning of worst-case analysis.	RE	1
3	Give any two applications of frames.	UN	3
4	Explain local optimum in hill climbing	UN	2
5	State any two algorithms using brute force technique.	UN	1
6	Define First Order Logic.	UN	3

Part B. 8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Distinguish between deterministic and non-deterministic environments.	UN	4
8	Describe hill climbing technique. Mention any one limitation	UN	2
9	Describe the linear search algorithm.	AP	1
10	Illustrate the structure of semantic nets and its usage scenario.	AP	3

Part C. 28 Marks.Time:60 Minutes (Cognitive Level:Apply(AP)/Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer.7 marks each.Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A) Apply divide and conquer technique with a suitable example algorithm.	AP	1, 1

Qn No.	Question	CL	CO
	OR B) Illustrate dynamic programming strategy with an appropriate example.		
12	A) Examine the structure and environment of intelligent agents. OR B) Compare nature-inspired intelligent agent for two systems of your choice.	AN	4, 4
13	A) Evaluate the performance of different heuristic search strategies(Hill climbing, Best first Search, A* algorithm) for solving path finding problems OR B) Assess the efficiency of BFS, DFS, and Best-First Search in terms of time, space, and completeness.	EV	2, 2
14	A) Design a script for a “movie theatre visit” using Scripts. OR B) Design a frame structure for representing a student object and explain the major concepts involved.	CR	3, 3