

Reg. No.:



Name:

University of Kerala

U9056

Second Semester FYUGP Degree Examination, April 2025

Discipline Specific Core Course

COMPUTER SCIENCE

UK2DSCCSC108 - Knowledge Representation and Intelligent Agents

Academic Level: 100-199

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	Infer the symbol to represent the Negation.	RE	1
2	List any two graph search algorithm.	RE	2
3	Describe Logical connectives.	UN	1
4	Relate on the importance of environment where an agent works.	UN	4
5	Recall the specialty of a weighted graph.	UN	1
6	Paraphrase Predicates in First-Order Logic.	UN	1

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	Explain Single destination Shortest Path Problem.	UN	1
8	Explain First order Logic.	UN	4
9	Discuss about the efficiency of algorithms.	AP	1
10	Use of Frames in knowledge representation.	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) Illustrate how heuristic search techniques help in A* search algorithm. OR B) Apply Generate and test search technique in brute force algorithm.	AP	2, 3
12	A) Infer the steps involved in working of autonomous agents. OR B) Compare Decrease by a constant with Decrease by a constant factor.	AN	4, 1
13	A) Discuss problem reduction and its concept in divide and conquer. OR B) Explain conceptual dependency in knowledge representation.	EV	3, 3

Qn No.	Question	CL	CO
14	A) Write a python program for the implementation of divide and conquer algorithm. OR B) Write a python program for the implementation of Depth First Search method.	CR	3, 3