

ARTIFICIAL INTELLIGENCE

(ECE)

Maximum Marks: 70

Date: 29.05.2025

Duration: 3 hours

- Notes: 1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
 3. Part B consists of 6 Data. Answer any one full question from each set.
 4. Each question carries 10 marks and you have a, b, c, d as sub questions.

Part-A

All the following questions are compulsory	10x2M=20 Marks	Marks	CO	RTL
1. Write the four basic methods of state space search?		2M	1	L1
2. What is the use of Heuristic Functions?		2M	1	L1
3. Can you represent the resolution in predicate logic?		2M	2	L1
4. What is resolution?		2M	2	L1
5. Define non-monotonic reasoning.		2M	3	L1
6. Define Conditional Probability?		2M	3	L1
7. Define weak slot and strong slot.		2M	4	L1
8. Define semantic nets.		2M	4	L1
9. What is Iterative Deepening?		2M	5	L1
10. What is Planning?		2M	5	L1

Part-B

Answer All the following questions.	(5x10M=50 Marks)	Marks	CO	RTL
11. Develop algorithm for depth first and breadth first search.		10M	1	L2
OR				
12. Explain induction & strong and weak characteristics.		10M	1	L2
13. Explain the various features of declarative and procedural frames.		10M	2	L2
OR				
14. Differentiate between forward versus backward reasoning with an example.		10M	2	L2
15. What is non-monotonic? How it is used in robot solving.		10M	3	L2
OR				
16. Explain the five main belief network with an example.		10M	3	L2
17. Explain about CYC 216 in detail?		10M	4	L2
OR				
18. Explain about Strong slot and filler structure?		10M	4	L2
19. Discuss about qualitative heuristic using Constraint Position?		10M	5	L2
OR				
20. Write about the main features of a knowledge system?		10M	5	L2