



R20 Regulation

Subject code: 307DB

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VII Semester Supplementary Examinations, November 2025

ARTIFICIAL INTELLIGENCE

(ECE)

Maximum Marks: 70

Date: 26.11.2025

Duration: 3 hours

- Note: 1. This question paper contains two parts A and B.
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20 Marks)		Marks	CO	BTL
1	Write the four components 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	Write truth tables for logical operators.	2M	4	L1
8	What are types of learning algorithms?	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=50Marks)		Marks	CO	BTL
11	Explain about A* algorithm in detail.	10M	1	L2
OR				
12	Explain the state space representation of water – jug problem.	10M	1	L2
13	Explain approaches to knowledge representation and issues in knowledge representation.	10M	2	L2
OR				
14	Difference between forward and backward reasoning.	10M	2	L2
15	What are problems in implementing non-monotonic reasoning in problem solving process?	10M	3	L2
OR				
16	Discuss about implementation of Breadth-First Search in detail.	10M	3	L2
17	Explain in detail about Conceptual Dependency.	10M	4	L2
OR				
18	Explain about CYC 216 in detail.	10M	4	L2
19	Discuss briefly about the Blocks World with suitable example.	10M	5	L2
OR				
20	Describe the Min-Max Algorithm and Alpha –beta Pruning.	10M	5	L2