R20 Regulation *Subject code: 3E5EF*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, April 2026

ARTIFICIAL INTELLIGENCE

(CSE)

Maximum Marks: 70 Date: 24.04.2026 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 forward reasoning	2M	2	L1
5	What is Dempster-Shafer Theory	2M	3	L1
6	Define non-monotonic reasoning.	2M	3	L1
7	Define semantic nets.	2M	4	L1
8	Define Scripts.	2M	4	L1
9	Define Goal Stack planning?	2M	5	L1
10	Write about Hierarchical planning?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Analyze the problem as a state space search.	10M	1	L3
	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	Differentiate between procedural versus declarative knowledge.	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 Strong slot and filler structures?	10M	4	L2

19	Discuss Planning Techniques in detail.	10M	5	L2
	OR			
20	Discuss in detail about the Block world planning.	10M	5	L2