



**B.Tech V Semester Supplementary Examinations, July 2024**  
**ARTIFICIAL INTELLIGENCE**  
**(COMPUTER SCIENCE & ENGINEERING)**

**Maximum Marks: 70**

**Date:30.07.2024 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		CO	Bloom Tx
All the following questions carry equal marks (10x2M=20 Marks)			
1	Define an "Intelligent agent".	CO1	L1
2	What is bidirectional search?	CO1	L1
3	What is Unification?	CO2	L1
4	List the issues in knowledge representation.	CO2	L1
5	What you mean by probabilistic reasoning?	CO3	L1
6	Differentiate monotonic reasoning and non-monotonic reasoning.	CO3	L2
7	Classify the semantic network.	CO4	L1
8	What is a weak slot and filler structure?	CO4	L1
9	Name two essential components of a planning system.	CO5	L1
10	What are the advantages of hierarchical planning over non-hierarchical planning?	CO5	L2
Part-B		CO	Bloom Tx level
Answer All the following questions. (5X10M=50Marks)			
11	Discuss the History of Artificial Intelligence. [10]	CO1	L2
OR			
12	Explain the following: i) Constraint satisfaction ii) Means Ends Analysis [5+5]	CO1	L3
13	A. What are the limitations of Predicate logic as a tool for Knowledge representation? [5] B. Discuss the Predicate Logic with all the logics and examples. [5]	CO2	L3
OR			
14	With the help of examples, summarize the various rules used in knowledge representation. [10]	CO2	L3
15	Discuss the Bayesian Belief Networks with an example. [10]	CO3	L2
OR			
16	Describe in detail about Dempster-Shafer theory. [10]	CO3	L2
17	Examine the concept of frames and inheritance in semantic nets. [10]	CO4	L4

	OR		
18	Assess the following sentences in conceptual dependency representation. (i) "Since drinking can kill you", I stopped. (ii) "John threatened David with a broken nose". [10]	CO4	L5
19	A. Explain the concept of iterative deepening in game-playing algorithms. B. Discuss the advantages of using iterative deepening in comparison to fixed-depth searches. [5+5]	CO5	L3
	OR		
20	A. Define nonlinear planning and how it differs from linear planning. B. Explore the concept of constraint posting and its role in addressing nonlinear planning problems. [5+5]	CO5	L3