

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURAJADA VIZIANAGARAM
III B. Tech I Semester Regular/Supplementary Examinations, April/May -2025
ARTIFICIAL INTELLIGENCE
(CSE)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**

All Questions Carry Equal Marks

UNIT-I			
1.	a)	Discuss the categorization of intelligent systems.	[7M]
	b)	Explain the techniques and characteristics of Artificial Intelligence.	[7M]
		(OR)	
2.	a)	Discuss the characteristics of an AI problem.	[7M]
	b)	List and explain the applications of Artificial Intelligence.	[7M]
UNIT-II			
3.	a)	Draw a state space representation of the Towers of Hanoi problem.	[7M]
	b)	Solve the water-jug problem by writing the production rules.	[7M]
		(OR)	
4.	a)	Describe the factors determining the choice of direction for a particular problem.	[7M]
	b)	Describe different control strategies used in problem-solving.	[7M]
UNIT-III			
5.	a)	Give the rules of inference in propositional logic and explain natural deduction with an example.	[7M]
	b)	Compare and contrast predicate and propositional logic.	[7M]
		(OR)	
6.	a)	Define Axiomatic system. State the axioms and rules used in the Axiomatic system.	[7M]
	b)	What is a work breakdown structure? Mention your thoughts on how WBS improves a software project.	[7M]
UNIT-IV			
7.	a)	Discuss Knowledge Representation using Semantic Networks.	[7M]
	b)	Explain the rules for conceptual dependencies.	
		(OR)	
8.	a)	What is meant by a Script? Write a script for Going to the Theater.	[7M]
	b)	Explain the rules for Conceptualization Blocks in CD.	[7M]
UNIT-V			
9.		With a neat diagram, explain the Expert System Architecture.	[14M]
		(OR)	
10.	a)	Build a rule-based expert system for criminal identification.	[7M]
	b)	What is an Inference Engine? Describe Backward and Forward chaining mechanisms used by an inference engine.	[7M]
