Hall Ticket Number :										

R-19

Code: 19A56IT

III B.Tech. II Semester Supplementary Examinations Nov/Dec 2023

Artificial Intelligence

(Common to CE & ME)

Max. Marks: 70 Time: 3 Hours

Answer *any five full questions* by choosing one question from each unit (5x14 = 70 Marks)

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Important Note: 1. On completing your answers. Compulsorily draw diagonal cross line on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 32+8=40, will be treated as malpractice.

			Marks	CO	BL
		UNIT–I			
1.	a)	Write and explain about PEAS description with examples?	7M	CO1	L2
	b)	What are problem characteristics? Explain with examples?	7M	CO1	L2
		OR			
2.	a)	Discuss about the structure of Intelligence agents.	4M	CO1	L2
	b)	Design and analyze a State-space representation of the Towers of Hanoi problem?	10M	CO1	L6
		UNIT–II			
3.	a)	Discuss any two search strategies that come under the heading of uninformed search?	7M	CO2	L2
	b)	Write short notes on constraint satisfaction?	7M	CO2	L2
		OR			
4.	a)	Define Heuristic search? What are the advantages of Heuristic search?	4M	CO2	L2
	b)	Describe the heuristic search technique applied to a hill-climbing problem with an example?	10M	CO2	L2
		UNIT–III			
5.	a)	Give the complete grammar of first order logic using BNF?	7M	CO3	L1
	b)	What is the logic behind in the completeness of resolution?	7M	CO3	L2
		OR			
6.	a)	Define the semantics of propositional logic. Draw the truth tables for the Five logical connectives?	7M	CO3	L4
	b)	Show the various steps in knowledge engineering process in first order logic.	7M	CO3	L5
		UNIT–IV			
7.	a)	Discuss the basic representations for planning?	7M	CO4	L4
	b)	What are the steps involved in knowledge engineering? Explain?	7M	CO4	L2
		OR			
8.	a)	Describe the planning strategy with state space search?	7M	CO4	L1
	b)	Write short notes on mental events and mental objects?	7M	CO4	L2
		UNIT–V			
9.	a)	Show the use of Bayes' rule with a suitable example?	7M	CO5	L5
	b)	Write and explain about conditional independence relations in belief networks?	7M	CO5	L2
		OR			
10.	a)	Illustrate prior probability and conditional probability with an example.	7M	CO5	L4
	b)	Discuss conditional independence relations in belief networks.	7M	CO5	L2

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