Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER– III • EXAMINATION – SUMMER 2015

Subject Code: 730802 **Date: 02/05/2015**

Subject Name: Artificial Intelligence

Time: 2:30 pm to 5:00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	(a)	What is Artificial Intelligence (AI)? Write the applications of AI in CAD/CAM.	07
	(b)	Describe the ñTuring testò with neat sketch.	07
Q.2	(a)	Explain the production system components.	07
	(b)	Draw the state-space diagram of tic-tac-toe for ñtwo-player -3X3 gridò.	07
		OR	
	(b)	Explain the Depth-First search technique.	07
Q.3	(a)	What do you mean by heuristic search technique? Describe any one.	07
	(b)	What is Pruning? Explain Alpha-Beta Pruning with algorithm.	07
		OR	
Q.3	(a)	Explain ñA*ò algorithm in detail.	07
	(b)	Explain Hill-climbing search procedure.	07
Q.4	(a)	List the basic operations by which symbol based learning consist and explain any one of them.	07
	(b)	Write the applications of natural language processing.	07
		OR	
Q.4	(a)	Explain application of genetic algorithm with suitable example.	07
	(b)	Write short note on reinforcement learning.	07
Q.5	(a)	Write the advantages and disadvantages of human expert over the expert system.	07
	(b)	Write the characteristics of neural network systems.	07
		OR	
Q.5	(a)	Write the issues associated with automated reasoning.	07
	(b)	Describe the predicate calculus.	07

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