GUJARAT TECHNOLOGICAL UNIVERSITY
BE- SEMESTER–VII (NEW) EXAMINATION – WINTER 2020

Subject Code:2174101   Date:25/01/2021

Subject Name:Artificial Intelligence for Robotics

Time:10:30 AM TO 12:30 PM   Total Marks: 56

Instructions:
1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

			MARKS
Q.1	(a)	What is AI? Explain in Brief.	03
	(b)	What is First order logic.	04
	(c)	What is intelligent agent? Explain in detail.	07
Q.2	(a)	What is planning?	03
	(b)	Explain goal stack planning in detail.	04
	(c)	Explain A* algorithm in detail.	07
Q.3	(a)	What is learning?	03
	(b)	What is depth first search?	04
	(c)	Explain Kalman filters.	07
Q.4	(a)	Explain Partial order planning.	03
	(b)	What do you mean by Learning? List out different type of learning methods.	04
	(c)	What is searching? Explain any one searching technique in detail.	07
Q.5	(a)	What is Actuators?	03
	(b)	Explain reinforcement learning method.	04
	(c)	Explain Dynamic Bayesian Networks	07
Q.6	(a)	What is tree?	03
	(b)	What is backward chaining?	04
	(c)	Explain Hidden Markov Models.	07
Q.7	(a)	Discuss : Turing Test.	03
	(b)	Explain difference between forwards reasoning and backward reasoning.	04
	(c)	Explain PEAS with one example?	07
Q.8	(a)	What is state space of a problem?	03
	(b)	Discuss with example: Constraint Satisfaction Problem.	04
	(c)	What is natural language Processing? explain in detail.	07

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