GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII (NEW) EXAMINATION – WINTER 2022

Subject Code:3171105   **Date:07-01-2023**

Subject Name:Introduction of Artificial Intelligence

Time:10:30 AM TO 01:00 PM   **Total Marks:70**

Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

			Marks
Q.1	**(a)**	List-out different techniques in AI.	**03**
	(b)	List-out generated problems in AI. Explain in Detail.	**04**
	(c)	What is AI in technical terms? Explain its historical background.	**07**
Q.2	**(a)**	List-out Heuristic Search Techniques of AI.	**03**
	(b)	What is Iterative deepening? Explain in detail.	**04**
	(c)	What is breath first search? Explain in detail.	**07**
		OR	
	(c)	What is depth first search? Explain in detail.	**07**
Q.3	**(a)**	What is Branch and Bound?	**03**
	(b)	Explain Refinement Search in detail.	**04**
	(c)	Explain Algorithm A^* with suitable example.	**07**
		OR	
Q.3	**(a)**	What is Admissibility of A^*.	**03**
	(b)	Explain Interactive Deepening A^*.	**04**
	(c)	Short Note: Recursive best first search.	**07**
Q.4	**(a)**	What is mini-max in game theory?	**03**
	(b)	Short note: Heuristics in game tree search.	**04**
	(c)	Explain in detail: Forward State Space Planning.	**07**
		OR	
Q.4	**(a)**	What is Alpha bita in game tree search?	**03**
	(b)	Write down the components of Planning Systems. Explain shortly.	**04**
	(c)	Explain in detail: Backward State Space Planning.	**07**
Q.5	**(a)**	What is Plan Space Planning? Explain Shortly.	**03**
	(b)	Explain Goal Stack Planning In detail.	**04**
	(c)	Draw a flowchart of Text generation of Neural Network and Explain in detail.	**07**
		OR	
Q.5	**(a)**	What is Hierarchical planning? Explain Shortly.	**03**
	(b)	How mechanical translation accrue in neural network?	**04**
	(c)	Short note: Grammars, Parsing Techniques	**07**