

GUJARAT TECHNOLOGICAL UNIVERSITY

BE MINOR - SEMESTER-VI EXAMINATION – SUMMER 2024

Subject Code:116AG02

Date:29-05-2024

Subject Name:Special topics in 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) Define AI. What are the task domains of AI?	03
	(b) Explain Expert System Shell with example.	04
	(c) Discuss Bayesian network and its application.	07
Q.2	(a) Elaborate artificial intelligence with suitable example along with its application.	03
	(b) What do you mean by Expert Systems? List out its four applications.	04
	(c) What is knowledge-based agent? Explain its role and importance.	07
	OR	
	(c) Explain process of knowledge engineering	07
Q.3	(a) Discuss : Turing Test.	03
	(b) Give the outline of min max algorithm.	04
	(c) Explain Architectures for Second Generation Knowledge-Based Systems:	07
	OR	
Q.3	(a) Describe working principle of Genetic Algorithm.	03
	(b) Explain Neurocomputing and Its Role in AI	04
	(c) Explain Distributed AI and its applications.	07
Q.4	(a) Describe Deep Reinforcement Learning.	03
	(b) Explain Generative Adversarial Networks.	04
	(c) Explain the Role of Uncertainty Measures and Principles in AI.	07
	OR	
Q.4	(a) Describe Audio Signal Processing with suitable example.	03
	(b) Explain Reinforcement Learning technique.	04
	(c) Explain Speech Processing Toolbox for MATLAB.	07
Q.5	(a) Compare DFS and BFS.	03
	(b) Discuss the approaches to knowledge representation	04
	(c) Explain Backpropagation algorithm in Neural Network.	07
	OR	
Q.5	(a) Differentiate Informed & Uninformed search. Give examples.	03
	(b) Explain MiniMax search procedure.	04
	(c) What do you mean by Expert Systems? List out its four applications.	07
