SOMAIYA VIDYAVIHAR UNIVERSITY

Semester: January 2025-April 2025		
Maximum Marks: 30 Examination:Re- In-Semester Examination		Duration : 1:15hrs
Programme code: 01 Programme: Computer Engineering	Class: TY	Semester: VI (SVU 2020)
Institute/School/ Department: K. J. Somaiya School of Engineering	Name of the department: Computer Engineering	
Course Code: 2UCC603	Name of the Course: Artificial Intelligence	

Q No.		Max. Marks	CO	BT Level
Q1	Define Turing Test. Define Rational agent. Justify why Acting rationally has been accepted as intelligent agent approach. **OR** Discuss any 3 major limitations of AI.	1+1+3 05	CO1 CO1	UN UN
Q2	Consider an agent that plays a game of Ludo with users in online mode. The users can choose their level of expertise as beginner, intermediate and expert. The game ends with a declaration of who has won the game and score based on how well the user (not the agent) has played the game. The agent is designed to win the game as far as possible, but still it loses the game sometimes. A. state and justify (in 1-2 lines) any five properties of task environment for such as agent. B. Suggest and justify appropriate agent architecture for designing this solution. Draw the block diagram(s) and give example contents for all blocks in the diagram.	 05 10	CO1	RM AP
Q3	Consider the following set of statements. Convert them to first order logic. a. All students who submit assignments on time are eligible for extra credit. b. Anyone who is eligible for extra credit can attend the bonus workshop. c. Alice is a student and submitted her assignment on time. d. Bob is a student but did not submit his assignment on time. e. Charlie is a student and submitted his assignment late. **Prove : <u>Alice can attend bonus workshop using resolution</u>** **OR** **Prove : <u>Bob cannot attend bonus workshop using backward chaining</u>** ***Note:*** a. Add additional knowledge if needed, convert in FOL and/or CNF as needed before using it. b. Clearly mention all facts and inference rules used for proof.	10	CO3	AP,AN