K. J. Somaiya College of Engineering, Mumbai-77
(Autonomous College Affiliated to University of Mumbai)
Semester: **January –May 2021**
In-Semester Examination

Class: TY B. Tech
Branch: COMPUTER ENGG **Semester: VI**
Full name of the course: Artificial Intelligence **Course Code: 2UCC603**
Duration: 1hr.15 min (attempting questions) **Max. Marks: 30**
+15 min (uploading)

Q. No	Questions	Marks
Q1	The task environment for game of cricket is: A. Fully observable, nondeterministic, dynamic, cooperative, episodic, discrete, multiagent B. Partially observable, nondeterministic, dynamic, cooperative and competitive, sequential, continuous, multiagent C. Partially observable, deterministic, static, competitive, sequential, discrete , multiagent D. Fully observable, deterministic, dynamic, cooperative and cooperative, sequential, discrete, multiagent	1M
Q2	Which agent deals with happy and unhappy states? A. Simple reflex agent B. Model based agent C. Learning agent D. Utility based agent	1M
Q3	A production rule consists of _____ A. A set of Rule B. A sequence of steps C. Set of Rule & sequence of steps D. Arbitrary representation to problem	1M
Q4	In which of the following situations might a blind search be acceptable? A. real-life situation B. complex game C. small search space D. cannot be implemented.	1M

Q5	The first widely-used commercial form of Artificial Intelligence (Al) is being used in many popular products like microwave ovens, automobiles and plug in circuit boards for desktop PCs. It allows machines to handle vague information with a deftness that mimics human intuition. What is the name of this AI? A. Boolean logic B. Human logic C. Fuzzy logic D. Functional logic	1M
Q6	A test wherein a computer is supplied with a questionnaire and if one cannot determine if the answers to the questionnaire were given by a computer or a human being follows_____ A. Think like human B. Think rationally C. Act like human D. Act rationally	1M
Q7	When is breadth-first search is optimal? A. When there is less number of nodes B. When all step costs are equal C. When all step costs are unequal D. None of the mentioned.	1M
Q8	The Set of actions for a problem in a state space is formulated by a A. Intermediate states B. Initial state C. Successor function D. None of the mentioned	1M
Q9	Uncertainty in the problem is typically addressed by _____ approach. A. Think like human B. Think rationally C. Act like human D. Act rationally	1M

Q10	A Professor at the Stanford University coined the word 'artificial intelligence' in 1956 at a conference held at Dartmouth college. A. David Levy B. John McCarthy C. Joseph Weizenbaum D. Hans Berliner	1M
Q2	Consider an intelligent agent program that is supposed to help senior citizens at Covid vaccination centers. The agent is supposed to guide people by answering their common queries, guide through the process for various stages and locations in the center. A. Suggest and justify an appropriate agent architecture to implement such an agent. (1+2M) B. Draw the block diagram of this proposed architecture and give representative contents in every block. (7M) OR For the AI agent mentioned in question 1, give: A. PEAS description (5M) B. State and justify in one line any 5 properties of the task environment. (5M)	10 M
Q3	Consider the water jug problem which is defined as: You are given two jugs, a 4-litre one and a 3-litre one, a pump which has unlimited **water** which you can use to fill the **jug**, and the ground on which **water** may be poured. Neither **jug** has any measuring markings on it. How can you get exactly 2 gallons of **water** in the 4-litre **jug**? A. Give Problem formulation for this problem. (5M) B. Draw state space for the problem. Give a sequence of the nodes visited for the given goal using iterative deepening search. (3+2M)	10 M