

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

B.Tech-VIII Semester (ECE)

COURSE CODE (CREDITS): 18B1WEC838 (3)

MAX. MARKS: 15

COURSE NAME: ARTIFICIAL INTELLIGENCE TECHNIQUES

COURSE INSTRUCTORS: EPN

MAX. TIME: 1 Hour

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*Note: (a) All questions are compulsory.*

*(b) Marks are indicated against each question in square brackets.*

*(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems*

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Q1. Briefly explain the history and foundations of Artificial Intelligence (AI). Highlight the key milestones that led to the development of AI as a field. [CO1, 2M]

Q2. Explain the concept of Rationality in AI. How is rational behavior measured in the context of intelligent agents? [CO2, 2M]

Q3. Define the concept of Performance Measures in the context of Intelligent Agents. Discuss how the performance of an intelligent agent is evaluated and measured. [CO2, 2M]

Q4. Define Simple Reflex Agents and explain with a suitable diagram. Discuss their limitations in handling complex environments. Provide examples where Simple Reflex Agents might be suitable and where they might fall short. [CO2, 3M]

Q5. Taking the example of an automated taxi driver, explain the performance measure, Environment, Actuators and Sensors required for an intelligent agent. [CO2, 3M]

Q6. Discuss the challenges and ethical considerations associated with the development and deployment of AI systems in various industries. How can these challenges be addressed to ensure responsible AI use? [CO1, 3M]