

Roll No.

Total No. of Pages : 02

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B.Tech. (CSE) PIT (Sem.-6)
ARTIFICIAL INTELLIGENCE
Subject Code : BTCS-602-18
M.Code : 79250
Date of Examination : 05-07-22

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
- 2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
- 3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

- a) Multi-agent environment
- b) Search graph
- c) Heuristic search
- d) Depth first search
- e) Probabilistic reasoning
- f) Bayesian networks
- g) Markov decision process
- h) Policy iteration in Markov decision process
- i) Q-learning algorithm in reinforcement learning
- j) Temporal difference learning.

SECTION-B

2. Discuss the various issues and challenges in Artificial Intelligence.
3. Explain any one game search technique in Artificial Intelligence.
4. Describe the concept of conditional probability in detail.
5. How does utility functions work in Markov decision process?
6. Explain how the Bayesian networks are represented and constructed?

SECTION-C

7. Discuss the searching algorithm with closed and open list. Give suitable example.
8. Differentiate between tree and graph structures.
9. With the help of suitable illustrations, describe the importance of Q-learning algorithm in reinforcement learning.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.