

SECTION-A

1. Write briefly :

- (a) Artificial Intelligence
- (b) Intelligent agent
- (c) Best, first search
- (d) Random search
- (e) Conditional probability
- (f) Hidden Markov model
- (g) Markov decision process
- (h) Partially observable Markov decision process
- (i) Passive reinforcement learning
- (j) Adaptive dynamic programming.

SECTION-B

2. Differentiate between tree and graph structures.
3. *"A* Search algorithm is one of the best and popular technique used in path-finding and graph traversals"*. Justify.
4. In a class, there are 70% of the students who like English and 40% of the students who likes English and Mathematics, and then what is the percent of students those who like English also like Mathematics?
5. How does value iteration work in Markov decision process?
6. Discuss the Q-learning algorithm in reinforcement learning.

SECTION-C

7. Differentiate between depth first and breadth first search.
8. Discuss the various application areas of Artificial Intelligence.
9. How Bayesian networks are represented? Explain.