



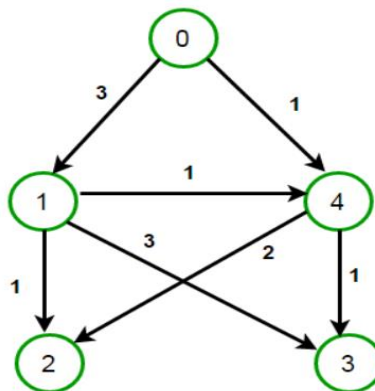
Surprise Test – 1: Artificial Intelligence and Machine Learning (MCA-203)

S. No. Questions

1. A* algorithm is:
 - A. Uniformed search algorithm
 - B. Informed search algorithm
 - C. General search algorithm
 - D. None

2. Priority Queue is used in:
 - A. Depth First Search
 - B. Breadth First Search
 - C. Best First Search
 - D. AO search

3. Consider the graph and apply BFS:



- A. If the source is 0 and destination is 3, the least-cost path from source to destination is [0,4,3] having cost 1.
 - B. If the source is 0 and destination is 3, the least-cost path from source to destination is [0,1,4,3] having cost 2.
 - C. If the source is 1 and destination is 3, the least-cost path from source to destination is [1,4,3] having cost 2.
 - D. If the source is 1 and destination is 3, the least-cost path from source to destination is [1,4,3] having cost 1.
4. How Machine Learning relates to Artificial Intelligence
 - A. Both are new techniques
 - B. AI is a subset of ML
 - C. ML is a subset of AI
 - D. They don't have any relation

 5. In Hill Climbing problem, what is true:
 - A. Plateau: All neighbours have same value, the algorithm stops.
 - B. Global Maximum: It is not best solution, objective function, here is not

- maximum.
- C. Local Maximum: It is the best possible solution.
- D. Ridge: It is a special kind of global maximum.
6. And-Or graph is used in:
- A. A* algorithm
 - B. AO algorithm
 - C. Hill climbing
 - D. Best first search
7. What is the problem space of means-end analysis?
- A. An initial state and one or more goal states.
 - B. One or more initial states and one goal state.
 - C. One or more initial states and one or more goal state.
 - D. One initial state and one goal state.
8. Backtracking is not possible in which algorithm:
- A. Hill Climbing
 - B. AO
 - C. A*
 - D. DFS
9. An algorithm is complete if:
- A. It starts with a solution
 - B. It does not terminate with a solution
 - C. It has a loop
 - D. It terminates with a solution when one exists
10. An algorithm A is admissible if _____
- A. It is not guaranteed to return an optimal solution when one exists
 - B. It is guaranteed to return an optimal solution when one exists
 - C. It returns more solutions, but not an optimal one
 - D. It guarantees to return more optimal solutions
11. Blind Search can be used for which of the following situations?
- A. Real-Life Situation
 - B. Small Search Space
 - C. Advanced Game Theory
 - D. None of the above
12. Which of the following are informed search methods?
- A. Best First Search
 - B. A* Search
 - C. Memory Bound Heuristic Search
 - D. All of the above
13. The correct ways to solve a problem of state-space search are?
- A. Forward from the Initial State
 - B. Backward from the Goal State
 - C. Both A and B
 - D. None of the above
14. The different types of machine learning are?
- A. Supervised
 - B. Unsupervised

- C. Reinforcement
- D. All of the above

15. What is state space in AI?

- A. Collection of all the problem states.
- B. A specific problem states out of all the problem states.
- C. Both A and B
- D. None of the above