Quiz-I (CS4403 Design & Analysis of Algorithms)

Points:
10/10

1.In a given graph if edges contain both positive and negative weight without any negative cycle then which algorithm is useful for finding the shortest path between a pair of nodes?
(1/1 Point)

- Dijkstra's algorithm
- Floyd algorithm
- Kruskal algorithm
- Bellman ford

2.Huffman code is based on which paradigm?
(1/1 Point)

- Divide and conquer
- Greedy technique
- Dynamic programming
- None

3.Which of the following is not a Greedy approach Algorithm?
(1/1 Point)

- Prims Algorithm
- Kruskal algorithm
- Huffman coding
- Bellman ford

4.The traveling salesman problem involves visiting each city how many times except the start vertex?
(1/1 Point)

- 2
- 1
- 3
- 0

5.1/0 knapsack problem is based on which paradigm?
(1/1 Point)

- Divide and conquer
- Dynamic programming
- Greedy Technique
- None of the above

6.What is the time complexity of matrix multiplied recursively by Divide and Conquer Method?

(2/2 Points)

- O(n)
- O(n^2)
- O(n^3)
- O(n!)

7.Which of the following is false in the case of a spanning tree of a graph G?

(1/1 Point)

- It is tree that spans G
- It is a subgraph of the G
- It includes every vertex of the G
- It can be either cyclic or acyclic

8.Consider a graph M with 3 vertices. Its adjacency matrix is [0, 1, 1; 1, 0, 1; 1, 1, 0]. Which of the following is true?

(2/2 Points)

- Graph M has no minimum spanning tree
- Graph M has a unique minimum spanning trees of cost 2
- Graph M has 3 distinct minimum spanning trees, each of cost 2
- Graph M has 3 spanning trees of different costs