Class Test-II DAA (CS4403 Design & Analysis of Algorithms)

Answer all the questions

Points:

10/10

1.The matrix chain multiplication problem is based on which paradigm?

(1/1 Point)

○ Divide and conquer

○ Backtracking

○ Dynamic programming

○ Greedy Technique

2.Which of the following standard algorithms is not Dynamic Programming based.

(1/1 Point)

○ Bellman–Ford Algorithm for single source shortest path

○ Floyd Warshall Algorithm for all pairs shortest paths

○ 0-1 Knapsack problem

○ Prim's Minimum Spanning Tree

3.Four matrices M1, M2, M3, and M4 of dimensions pxq, qxr, rxs and sxt respectively can be multiplied in several ways with different numbers of total scalar multiplications. If p = 10, q = 100, r = 20, s = 5, and t = 80, then what is the minimum number of scalar multiplications needed to find the chain multiplication of the above four matrices.

(4/4 Points)

○ 248000

○ 44000

○ 19000

○ 25000

4.Among the following given options for the solution vector X for 8-queens problem, which one of the following is not a feasible solution?

(1/1 Point)

○ (5,3,8,4,7,1,6,2)

○ (4,1,5,8,6,3,7,2)

○ (1,6,3,8,3,2,4,7)

○ (6,2,7,1,4,8,5,3)

5.There are four students in a class namely A, B, C and D. A tells that a triangle is a bipartite graph. B tells pentagon is a bipartite graph. C tells square is a bipartite graph. D tells heptagon is a bipartite graph. Who among the following is correct?

(1/1 Point)

○ A
○ B
○ C
○ D

6.What happens when the backtracking algorithm reaches a solution?
(1/1 Point)

○ It backtracks to the root

○ It continues searching for other possible solutions

○ It traverses from a different route

○ Recursively traverses through the same route

7. In what manner is a state-space tree for a backtracking algorithm constructed?
(1/1 Point)

○ Nearest neighbour first

○ Twice around the tree

○ Breadth-first search

○ Depth-first search