DAA MID 2 IMP Questions

Short answer questions

What is an algorithm?

How to analyze algorithm?

What is time and space complexity?

Define Spanning tree?

Explain about debugging and profiling?

Explain divide and conquer?

What are the asymptotic notations?

Define Disjoint sets with example?

Long answer questions

What are the Asymptotic notations? Explain briefly.

Explain about time complexity? Find time complexity of sum of N numbers.

Explain about space complexity? Find Space Complexity of matrix multiplication and Fibonacci series?

Write BFS, DFS algorithm. With an example?

Explain about Binary search with an example?

Explain Disjoint sets and its operations?
Explain about algorithm and pseudo code?

What Divide and Conquer strategy. Explain its applications?

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What is dynamic programming?

 Define backtracking?

Define branch and bound?a

 What is p,np,np-hard and np-complete?

Define graph coloring?

Define Hamiltonian path?

What is principle of optimality?

Define chromatic number?

Explain n- queens problem?

What is deterministic algorithm?

Long answer questions

Explain OBST?

Solve 0/1 knapsack problem using greedy method and dynamic programming?

Explain 4 Queens problem. Give state space tree?

Solve sum of subsets problem? Consider the following instance n=4 m=7,w=(1:4)=(4,3,5,2)?

What is non deterministic algorithm? Explain with an example algorithm?

Explain graph coloring and hamilitonian path with an example graph?

Explain cooks theorem?

Explain travelling sales problem using branch and bound for given cost matrix?

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5   3   6
4   2   7
7   5   8
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Discuss P and NP classes?

Differentiate between deterministic and non deterministic algorithms?

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