2023-24, First 4 Questions

(V) Fractional knapsack problem is solved most efficiently by which algorithm design technique ? 1

(IX) The 0-1 Knapsack problem can be solved using Greedy algorithm -state True or False. 1

(XII) Given items as {value,weight} pairs {{40,20},{30,10},{20,5}}. The capacity of knapsack is 20. Find the maximum value output assuming items to be divisible 1

5. For the given set of 5 items and the knapsack capacity of 10 kg, find the maximum profit. You to take fractional amount of any item.
Weights, Wi = {3, 3, 2, 5, 1}
Profits, Pi = {10, 15, 10, 12, 8} 5

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(III) What is the time complexity of Knapsack algorithm using Greedy method? 1

5. Find the maximum profit and solution vector of the following fractional knapsack problem:
Profit P = {16, 60, 150, 25, 150}
Weight W = {4, 10, 50, 5, 75}
Knapsack Size m = 44

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