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Class Test – 3 (Set 2)

Course Code: SE 214; Course Title: Algorithm Design and Analysis

Time: 30 Minutes Marks: 15

1.		You are managing a small logistics business and have a delivery truck that can carry a limited weight. You have several products that can be delivered, each with a weight and a profit. Question: Given the following list of products: Product A: Weight = 3, Profit = 10 Product B: Weight = 2, Profit = 7 Product C: Weight = 4, Profit = 12 Product D: Weight = 5, Profit = 15 If the truck has a weight capacity of 8, use a dynamic programming approach to find the maximum profit you can achieve. Which products should be selected?	8
2.		You are given coins of denominations 1, 3, and 5. You need to make a total of 11 units using the fewest number of coins possible. What is the minimum number of coins needed? Explain the steps using dynamic programming.	7