

Class Test – 3 (Set 1)

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

Time: 30 Minutes

Marks: 15

1.	You have a set of numbers {2,3,5,7}. In how many ways can you select numbers from this set such that their sum is exactly 10?	7
2.	You are a treasure hunter and have found a cave full of valuable items. Each item has a weight and a value. However, you have a backpack that can only carry a limited weight. Question: Given the following list of items: Item 1: Weight = 2, Value = 3 Item 2: Weight = 4, Value = 5 Item 3: Weight = 3, Value = 4 Item 4: Weight = 5, Value = 7 If your backpack can carry a maximum weight of 7, use dynamic programming to determine the maximum total value you can carry. Also, identify which items should be included to achieve this maximum value.	8