United International University (UIU)
Dept. of Computer Science & Engineering (CSE)
CSE 2217 Spring 2022
Class Test 3   Total Marks: 10
You have to answer here. No extra page will be provided.

1   Suppose a country has the following coins available: {1, 6, 12, 25}.
    (a) Use DP to form 13 taka using minimum number of coins. What are those coins?   **[3+1]**
    (b) Show an example of an amount where the greedy strategy for the Coin-Change problem does not
    provide an optimal solution.   **[2]**

2   Discuss how the problem of computing the Fibonacci sequence demonstrates overlapping subproblems. Also, discuss how dynamic programming helps optimizing the computation. **[2]**

3   Suppose that you have got a set of the following activities, with the given start and end times for the Activity Selection problem: { [1, 7), [2, 5), [9, 15), [6, 9), [11, 15), [3, 6) }
Find an optimal solution of the problem. Write your strategy in one sentence. **[2]**