**Algorithm Design Lab 2**

**Document Id 48**

**Questions**

Q1 Describe ‘optimal solution’ w.r.t Dynamic Programming

Q2 true or false “Dynamic solutions are generally of polynomial time complexity”

Q3 Are Dynamic algorithms generally recursive ?

Q4 Are Dynamic algorithms applicable to a wide range of problems ?

Q5 In the Justify text we used HashMaps as tables why ?

Q6 Describe Memoization as it applies to Dynamic algorithms

Q7 In the Justify text we used Memoization is this always necessary ?

Q8 Can we always be confident that techniques like recursion and Memoization will always deliver the same efficiency increase across operating systems and platforms

**Practical Task Optimise Stock Trades**

Given an array of transaction values over 6 days ( eg Stock trades)

**int** possibleTrades[] = {2, -4, 0, 18, -2, -4};

You have a trading algorithm and you are asked to verify its choice of trades

You have a trade on day 0 then for the next 5 days you can sell, find the optimal trade

Write a dynamic algorithm that optimises the trade you could make

[0, 3] -> 16