Assignment analysis and design of algorithms

a) Design linear search algorithm and state it best case scenario
   5 marks

b) Explain in detail the general framework for analyzing an algorithm's efficiency.   4 marks

c) Write an algorithm to check whether a number entered by user is prime or not. And find its time complexity
   5 marks

d) Describe using example and Determine the running time for Huffman algorithm 5 marks

e) List the efficiency classes of algorithms   4 marks
f) Describe principles of optimality   5 marks

g) Differentiate between divide and conquer technique and Dynamic programming   5 marks

h) i. Write DIJKSTRA's algorithm using a suitable example   5 marks

   ii Discuss the purpose of DIJKSTRA's algorithm   4 marks

i) Describe knapsack problem using Greedy methods   4 marks

j) Develop algorithm to compare two numbers and print the largest number   5 marks

k) Explain the method for solving recurrences   4 marks