Multiple choice Questions

Q.1 Which of the following methods can be used to solve the 0-1 Knapsack problem?
(A) Brute force algorithm
(B) Recursion
(C) Dynamic programming
(D) Brute force, Recursion and Dynamic Programming

RIGHT ANSWER: (D)

Q.2 You are given a 0-1 knapsack that can carry a maximum weight of 60. There are 4 items with weights {20, 30, 40, 70} and values {70, 80, 90, 200}. What is the maximum value of the items you can carry using the knapsack?
(A) 160
(B) 200
(C) 170
(D) 90

RIGHT ANSWER: (A)

Q.3 What is the time complexity of the brute force algorithm used to solve the Knapsack problem?
(A) O(n)
(B) O(n!)
(C) O(2 raised to power n)
(D) O(n raised to power 3)

RIGHT ANSWER: (C)

Q.4 The 0-1 Knapsack problem is _____ and fractional knapsack is _____.
(A) Greedy algorithm
(B) Dynamic Problem and Greedy algorithm
(C) Greedy Problem and Dynamic Problem
(D) Dynamic algorithm

RIGHT ANSWER: (B)

Q.5 Which of the following statement is true-
(A) Since Python does not have a concept of private variables, it is a convention to use leading underscores to declare a variable private. This is why we mustn't do that to variables we do not want to make private
(B) A shallow copy, however, copies one object's reference to another and deep copy copies an object into another
(C) To implement function for switch-case (switcher), we may use a dictionary.
(D) All statement are True

RIGHT ANSWER: (D)