



ملاحظة : الإجابة عن أربعة أسئلة فقط

Q1

A)

- 1- What do we mean by data structure? Explain that in detail
- 2- Let X is a four dimensions array (int X [4] [9] [6] [8]) compute the location of the element X [3] [7] [4] [5] using Row-Wise method when the base address is 415
(Note: i=3 , j=7, k=4 , L=5) (6.5 mark)

B)

Convert the following infix expression into postfix notation using two Stacks
(A>B) AND ((E-C>A) OR (G<F)) (6 marks)

Q2

Write a program that reads in a string and prints its character in reverse order
[Note: the string terminator is a blank which should not be printed as a part of the reverse string and the output should not be printed any letter] (12.5 mark)

Q3

Let (Table) be a Queue of size (20) characters, write program that execute the following Steps in sequence

- 1- insert six elements
- 2- delete two elements
- 3- convert Table into stack (12.5 mark)

Q4

A)

Write complete recursive program that find maximum and minimum number in one dimension array when Size of array is 25. (6.5 mark)

B)

Write program to translate binary search tree into array. (6 marks)

Q5

Let (L) be a link list of size (14) characters, write program that execute the following Steps in sequence

- 1- create this list
- 2- insert three elements in end of list
- 3- delete 4th element
- 4- split L into equal two lists (12.5 mark)