Date: 10 / 6 / 2015   Subject:Data Structure
                                                   Class:2nd
Time: 3 hours   Branch: all the branch
Lecturer:Alaa A.H. Hashim

Note: answer **Four** Questions only

Q1: Given a circular queue of size (8) contain (4) elements, Do the following (using program segment) :

   A) add (5) elements? Then   (4 mark)
   B) Convert the negative values to empty stack of size (5)? Then (4.5 mark)
   C) print the final state of the stack ?   (4 mark)
   Note: each step depend on previous step

Q2: Using recursion , write function to find the number of repeated value in one dimension array of size (15) , then print the result in main function ?

                                                   (12.5   mark)

Q3: Write complete program to construct list of (20) nodes , then write function to find the largest and smallest values ,and print the results in main function?   (12.5   mark)

Q4: Write complete program contain :

   A) function to construct binary tree ?   (5.5 mark)
   B) function to find a particular value?   (4   mark)
   C) print this tree?   (3 mark)

Q5: Given a circular link list (cplist) , convert the positive elements of this circular list to an empty stack of size (6)?(using program segment)?

                                                   (12.5   mark)