Set A

B.C.A (Part -II) (Semester - III) (CBCS) Examination
Oct. /Nov. – 2023

College Name : Kamala College, Kolhapur

Subject Name : Data Structure using C

Subject Code : 83376   **Total Marks: 70**

Day and Date : Thursday, 30/11/2023   **Period: 3 hours**

Time : 10.30 am. To 01.30 pm.   **Total pages: 3**

Instructions

     1) *Figures to the right indicate full marks*

     2) *Q.1 & Q.6 are compulsory and attempt any three from Q.2 to Q.5*

Q. 1   **20**

   A) Multiple Choice Question   **[10]**

     1) Which of the following is not a type of Linked List ?

        A. Circular linked list   B. Double linked list

        C. Hybrid linked list   D. Singly linked list

     2) In single linked list the beginning of the list is marked by special pointer named as.......

        A . Array   B. Pointer   C. Null   D. Start

     3) In Circular linked list last-> link always points to the ....

        A. Last node   B. first node.

        C. NULL   D. Prev Node

     4) In the stack process of inserting an element in the stack is called as _____.

        A. Push   B. Pop

        C. Insert   D. None of the above

     5) User push 1 element in the stack having already five elements and having stack size as 5 then stack becomes _____.

        A. Empty Collection   B. Underflow of Stack

        C. Overflow of Stack   D. None of the above

     6) Stack is also called as ....

        A. Last in first out   B. First in first out

        C. Last in last out   D. All of these.

7) When inorder traversing a tree resulted E A C K F H D B G; the preorder traversal would return
   A. FAEKCDBHG
   B. FAEKCDHGB.
   C. EAFKHDCBG
   D. FEAKDCHBG
8) Each node in singly linked list has..........fields.
   A. 2   B. 3   C. 1   D. 4
9) The situation when in a linked list START=NULL is ....
   A. Underflow
   B. Overflow
   C. Houseful
   D. Saturated
10) Which indicates pre-order traversal?
   A) Left sub-tree, Right sub-tree and root
   B) Right sub-tree, root, Left sub-tree
   C) Right sub-tree, Left sub-tree and root
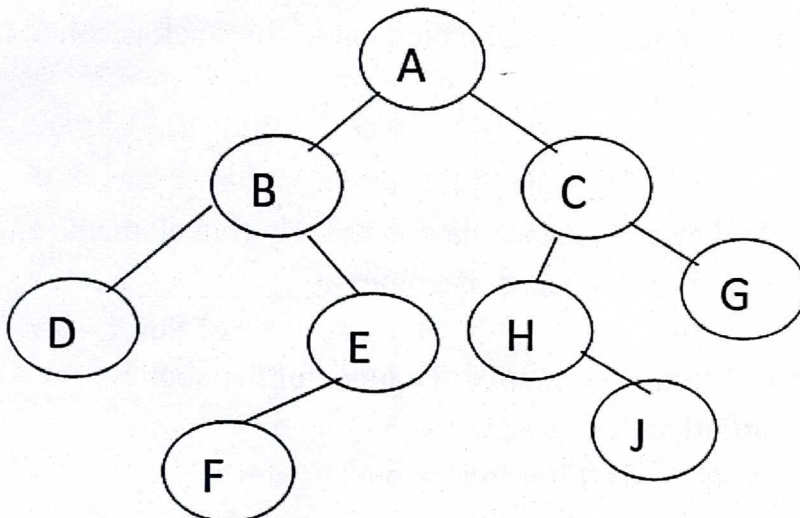   D) Root, Left sub-tree, Right sub-tree

B) Short Answer Question (Any 2 out of 3)   [10]
   1) Bubble Sort
   2) Linear Search
   3) Applications of Linked list

Q.2   Explain the circular link list.   10
Q.3   Write a note on Queue implementation using C.   10
Q.4   Write a note on Selection sort with help of example.   10
Q.5   For the given Binary Tree, perform Inorder, Preorder and Postorder
      traversal.   10

Q.6 Write short notes. (Any four out of six)

1) Stack
2) Doubly Linked List.
3) Tree Data Structure.
4) Applications of Stack.
5) Graph.
6) Merge Sort.