POLL TEST

Q.1 An algorithm takes 6 seconds to solve a problem of size 100 and ten minutes to solve a problem of size 1000. What is likely running time of the algorithm?
(A) Constant
(B) Linear
(C) Quadratic
(D) Cubic
(E) None of the above

RIGHT ANSWER: (C)

Q.2 Insertion of a node into a doubly linked list requires how many changes to the various next and prev pointers
(A) No changes
(B) 1 next and 1 prev
(C) 2 next and 2 prev
(D) 3 next and 3 prev
(E) None of the above

RIGHT ANSWER: (C)

Q.3 For linked list implementation of the queue where are the enqueue and dequeue performed?
(A) Enqueue in front of the first element, dequeue the first element
(B) Enqueue after the last element, dequeue the last element
(C) Enqueue after the last element, dequeue the first element
(D) Enqueue in front of the first element, dequeue the last element
(E) Enqueue after the first element, dequeue the first element

RIGHT ANSWER: (C)

Q.4 Let C(T) be the number of leaves in a binary tree rooted at T. Assume that IsLeaf(T) returns 1 if T is a leaf. Which of the following observation leads to recursive implementation
(A) C(T) = C(T.Left) + C(T.Right)
(B) C(T) = C(T.Left) + C(T.Right) + 1
(C) C(T) = C(T.Left) + C(T.Right) + IsLeaf(T) + 1
(D) C(T) = C(T.Left) + C(T.Right) + IsLeaf(T)
(E) None of the above

RIGHT ANSWER: (D)

Q.5 If the shortest path algorithm is in run and a vertex is not reachable from the starting point then what happened?
(A) A distance of infinite is reported
(B) A distance of -1 is reported
(C) A distance of zero is reported
(D) The algorithm enters in infinite loop
(E) The algorithm's result is undefined

RIGHT ANSWER: (A)