Q.1 An average case time complexity of a binary search algorithm is:

A. O(log n)

B. O(n)
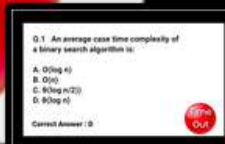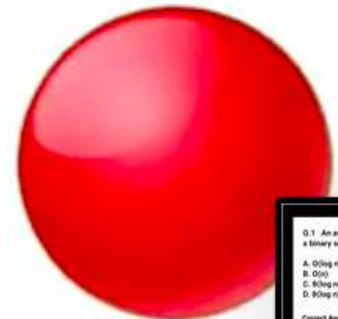
C. θ(log n/2))

D. θ(log n)

Correct Answer : D

Time Out

Q.2 In a binary search algorithm worst case occurs

A. if key is found at non-leaf position

B. if key is found at leaf position

C. if key is at root position

D. if either key is found at leaf position or key does not exists.

Correct Answer : D

Q.3 Binary Search algorithm is also called as:

A. Logarithmic Search

B. Half-interval Search

C. Exponential Search

D. Both options 1 and 2)

E. None of the above

Time Out

Correct Answer : D

Q.4 What is an asymptotic lower bound for binary search algorithm?

A. $O(\log n)$
B. $\Omega(n)$
C. $\theta(\log n)$
D. $\Omega(\log n)$
E. None of the above

Correct Answer : E

Time Out

Q.5 In a selection sort max _____ no. of iterations are required to sort all array

elements.

A. n

B. n+1

C. n-1

D. 2n

Correct Answer : C

Q.6 What is the worst case time complexity of insertion sort?

A. $\Omega(n^2)$

B. $O(n^2)$

C. $O(n)$

D. $\theta(n^2)$

Correct Answer : B

Q.7 In which of following sorting algorithm elements which are at two consecutive positions gets compared?

A. Selection Sort
B. Bubble Sort
C. Insertion Sort
D. Quick Sort

Correct Answer : B

Q.8 In which of the following sorting algorithms
 magnitudes of time
complexities are same in all the cases ?

A. Bubble Sort
B. Insertion Sort
C. Merge Sort
D. all of the above
E. none of the above

Correct Answer : C

Q.9 Which of the following sorting algorithm works efficiently for already
sorted input sequence by design ?

A. Selection Sort

B. Bubble Sort

C. Insertion Sort

D. both 2) and 3

E. none of the above

Correct Answer : C

Q.10 In Selection Sort algorithm, what will the array
 status after 3 iterations for

given input: 30 20 60 50 10 40.

A. 10 20 30 40 50 60
B. 10 30 20 40 50 60
C. 10 20 30 60 50 40
D. 10 20 30 50 60 40

Correct Answer : C

Q.11 What is time complexity of addition and deletion operations on an array?

A. O(1)

B. O(n)

C. O(log n)

D. none of the above

Correct Answer : B

Q.12 On success malloc() function returns
_____ and on failure it returns

_____.

A. true, false

B. starting addr of dynamically allocated block from heap section, -1

C. starting addr of dynamically allocated block from heap section, NULL

D. None of the above

Correct Answer : C

Time Out

Q.13 By Default all local variables belongs to _____ storage class, and global variables belongs to _____.

A. static, extern

B. extern, static

C. auto, extern

D. extern, auto

Correct Answer : C

Q.14 What is the time complexity to add node into the singly linear linked list at last position?

A. O(n)

B. O(n^2)

C. O(1)

D. O(log n)

Correct Answer : A

Q.15   On an array data structure searching operation can be performed efficiently in _____ time.

A. O(1)
B. O(log n)
C. O(n log n)
D. none of the above

Correct Answer : B

Time Out

Q.16 Which of the following statement is false about singly linear linked list?

A. In a SLLL, traversal can be done only in a forward direction.

B. In a SLLL, add and delete node at last position operations takes O(n) time.

C. In SLLL, add and delete node at first position operations takes O(1) time.

D. In SLLL, previous node of any node can be accessed from it.

Correct Answer : D

Q.17 Which of the following operations in a SCLL takes O(1) time?

A. Add node at last position

B. Add node at first position

C. Delete node at last position

D. Delete node at first position

E. None of the above

Correct Answer : E

Q.18 Which of the following statement is false?

A. Linked List elements gets stored into the heap section.

B. Add element into a linked list at specific position takes O(1) time.

C. Searching operations is efficient on array than linked list.

D. None of the above

Correct Answer : B

Q.19 What is the time complexity to add node into the singly linear linked list at first position?

A. O(n)

B. O(n^2)

C. O(1)

D. O(log n)

Correct Answer : C

Q.20 Which of the following statement is false
 about DLLL?

A. This type of linked list can be traverse in
forward as well backward
direction.
B. Element can be added into this list at last
position in O(1) time.
C. Element can be deleted from this list
which is first position takes O(1) time.
D. Previous node of any node can be accessed.

Correct Answer : B