DS DAYWISE QUIZ MCQs

Q. 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)
Answer: D

Q. 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.
Answer: D

Q. 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
Answer: D

Q. What is an asymptotic lower bound for binary search algorithm?
A. O(log n)
B. Ω(n)
C. θ(log n)
D. Ω(log n)
E. None of the above
Answer: E

Q. 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
Answer: C

Q. What is the worst case time complexity of insertion sort?
A. Ω(n^2)
B. O(n^2)
C. O(n)
D. θ(n^2)
Answer: B

Q. 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
Answer: B

Q. 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
Answer: C

Q. 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
Answer: C

Q. 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
Answer: C