CRASH COURE 2025

DS & AI

Algorithms

Sorting Algorithms

Q1 What is the number of comparisions (element comparison) needed to sort logn elements using radix sort?

(A) 0 (B) O(n)

(C) O(logn) (D) O(log logn)

Q2 Let the number of 84, 98, 142, 284, 362, 999, 738, 393 and 561 be sorted using radix sort what will be 8th numberin the sequence of number after sorting the second digit_____?

Q3 Consider the following array with 9 elements:

A [9] :	10	30	60	70	90	80	100	101	120

count the total number of comparisons done, if insertion sort is applied on the above array___ .

Q4 Which of the following sorting techneque is best suitable for swaps in worst case with n elements

(A) Insertion sort (B) selection sort

(C) Bubble sort (D) Radix sort

Q5 Consider the following statements:

S1: Number inversions are same as number of comparisions in insertion sort.

S2: Number of inversions are same as number of swaps in slection sort.

Which of the following is correct.?

(A) S1 only (B) S2 Only

(C) Both (D) None

Q6 Consider the following array:

A [7] :	70	20	50	90	13	12	27
	0	1	2	3	4	5	6

What is the index value of elements 13 after second pass of bubble sort?

Q7 Which of the following sorting technique is/are stable sorting technique.

(A) Bubble sort (B) Insertion sort

(C) Selection sort (D) Quick sort

Q8 Which sorting techneque having the worst case time $O(n^2)$ to sort n elements:

(A) Bubble sort (B) insertion sort

(C) Selection sort (D) Merge sort

Answer Key

Q1	(A)	Q5	(D)
Q2	98	Q6	2
Q3	9~9	Q7	(A, B, C)
Q4	(B)	Q8	(A, B, C)