

MCQs On Sorting Algorithms



Question 14: Which sorting algorithms is most efficient to sort string consisting of ASCII characters?

- A. Quick sort
- B. Heap sort
- C. Merge sort
- ☒ D. Counting sort

Sort (in Range)
(0-255)

Correct Answer: D

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Question 13: Which of the following algorithms has lowest worst case time complexity?

- A. Insertion sort
- B. Selection sort
- C. Quick sort
- D. Heap sort

Correct Answer: D

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Question 12: The time complexity of heap sort in worst case is

- A. $O(\log n)$
- B. $O(n)$
- ☒ C. $O(n \log n)$
- D. $O(n^2)$

Correct Answer: C

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Question 11: Which of the following is not an in-place sorting algorithm?

A. Selection sort

B. Heap sort

C. Quick sort

D. Merge sort

do not take any extra memory

Correct Answer: D

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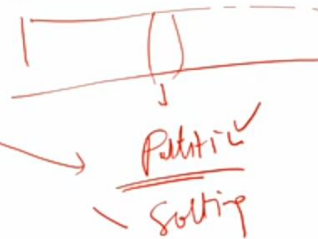
Question 10: Quick Sort can be categorized into which of the following?

A. Brute Force technique

B. Divide and conquer

C. Greedy algorithm

D. Dynamic programming



Correct Answer: B

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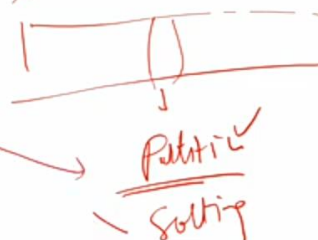
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Question 9: Which of the following sorting algorithms in its typical implementation gives best performance when applied on an array which is sorted or almost sorted.

- A. Quick Sort $O(n^2)$
- B. Heap Sort $n \log n$
- C. Merge Sort $n \log n$
- D. Insertion Sort $O(n) \rightarrow$

Correct Answer: D

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Question 7: The complexity of merge sort algorithm is

- A. $O(n)$
- B. $O(\log n)$
- C. $O(n^2)$
- D. $O(n \log n)$

B.C	A.V.	W.C
$O(n \log n)$	$O(n \log n)$	$O(n \log n)$

Correct Answer: D

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Question 15: A list of n string, each of length n is sorted into lexicographic order using the merge-sort algorithm. The worst case running time of this computation is

- A. $O(n \log n)$
- B. $O(n^2 \log n)$
- C. $O(n^2 + \log n)$
- D. $O(n^2)$

W.C. T.C. M.S. $O(n \log n)$
 $n \cdot n \times n$
 $O(n^2 \log n)$

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Question 5: What is the advantage of bubble sort over other sorting techniques?

- A. It is faster
- B. Consumes less memory
- C. Detects whether the input is already sorted
- D. All of the mentioned

Correct Answer: C

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Question 2: The given array is $arr = \{2, 3, 4, 5, 6\}$. (bubble sort is implemented with a flag variable) The number of iterations in selection sort and bubble sort respectively are,

- A. 5 and 4
- B. 1 and 4
- C. 0 and 4
- D. 4 and 1



Correct Answer: B

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