CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 1 of 30 (Start time: 10:48:59 PM, 04 January 2021)

Total Marks: 1

The sequence of merge sort algorithm is:

Select the correct option

- Divide-Combine-Conquer
- Conquer-Divide-Combine
- Divide-Conquer-Combine
- Combine-Divide-Conquer

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 2 of 30 (Start time: 10:49:51 PM, 04 January 2021) **Total Marks:** 1

While analyzing algorithms, _____and _____ are usually considered difficult to calculate.

Select the correct option

- ○ Finite, Infinite
- ● Floor, ceiling
- ○ Row, Column
- ○ Graph, Tree

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 3 of 30 (Start time: 10:51:22 PM, 04 January 2021)

Total Marks: 1

Catalan numbers are related the number of different _____ on 'n' nodes.

Select the correct option

- arrays
- linked lists
- binary trees
- functions

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 4 of 30 (Start time: 10:51:56 PM, 04 January 2021)

Total Marks: 1

While Sorting, the ordered domain means for any two input elements x and y _____ satisfies only.

Select the correct option

- x < y
- x > y
- x = y
- All of the above

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 5 of 30 (Start time: 10:53:16 PM, 04 January 2021)

Total Marks: 1

The running time of brute-force algorithm to solve Knapsack problem is _____.

Select the correct option

- O(n)
- O(n3)
- O(n!)
- O(2^n)

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 6 of 30 (Start time: 10:54:55 PM, 04 January 2021)

Total Marks: 1

Bubble sort takes theta _____ in the worst case.

Select the correct option

- (n2)
- (n)
- log(n)
- nlog(n)

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 7 of 30 (Start time: 10:56:48 PM, 04 January 2021)

Total Marks: 1

For quick sort algorithm, partitioning takes theta _____.

Select the correct option

- (n)
- log(n)
- nlog(n)
- n2log(n)

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 8 of 30 (Start time: 10:57:47 PM, 04 January 2021)

Total Marks: 1

Which one of the following problems can be solved using dynamic problem?

Select the correct option

- Bubble sort problem
- Matrix chain multiplication problem
- Greedy search problem
- Fractional knapsack problem

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 9 of 30 (Start time: 10:59:27 PM, 04 January 2021)

Total Marks: 1

Counting sort is suitable for sorting the elements within range 1 to P, where _____

Select the correct option

- P is large
- P is small
- P is very large
- P is undetermined

Question # 10 of 30 (Start time: 10:59:41 PM, 04 January 2021) **Total Marks:** 1

In Dynamic Programming based solution of Knapsack Problem, if we decide to take an object 'i', then we gain _____.

Select the correct option

- ○ W (Total Weight of Knapsack)
- ○ V (Total Value of all items)
- ● vi (Value of object i)
- ○ None of the given option

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 11 of 30 (Start time: 11:01:08 PM, 04 January 2021) **Total Marks:** 1

Quicksort is a/an _____ and _____ sorting algorithm.

Select the correct option

- ○ Not in-place, not stable one
- ● In-place, not stable one
- ○ In-place, stable one
- ○ Not in-place, stable one

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 12 of 30 (Start time: 11:02:18 PM, 04 January 2021)

Total Marks: 1

Heap sort is a/an _____ and _____ sorting algorithm.

Select the correct option

- ○ Not in-place, not stable one
- ○ In-place, stable one
- ● In-place, not stable one
- ○ Not in-place, stable one

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 13 of 30 (Start time: 11:03:58 PM, 04 January 2021)

Total Marks: 1

Quick sort algorithm divide the entire array into _____ sub arrays.

Select the correct option

- (●) 2
- ( ) 3
- ( ) 4
- ( ) 5

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 14 of 30 (Start time: 11:05:19 PM, 04 January 2021)

Total Marks: 1

The asymptotic growth of n(n+1)/2 is:

Select the correct option

- (●) $O(n^2)$
- ( ) O(n)
- ( ) O(n+2)
- ( ) O(n log n)

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 15 of 30 (Start time: 11:06:45 PM, 04 January 2021)

Total Marks: 1

Following is not the application of Edit Distance problem.

Select the correct option

- Speech recognition
- Spelling Correction
- Ascending Sort
- Computational Molecular Biology

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 16 of 30 (Start time: 11:07:44 PM, 04 January 2021)

Total Marks: 1

Al-Khwarizmi was a/an _____.

Select the correct option

- artist
- mathematician
- astronomer
- khalifah

Question # 17 of 30 (Start time: 11:08:40 PM, 04 January 2021)

Total Marks: 1

In Brute Force solution of Knapsack Problem, there are _____ possible combinations for n items.

Select the correct option

- 2
- n
- 2^n (2 raise to the power n)
- 3^n (3 raise to the power n)

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 19 of 30 (Start time: 11:12:04 PM, 04 January 2021)

Total Marks: 1

Selection sort is a _____sorting algorithm.

Select the correct option

- (●) In-place
- ( ) Not In-Place
- ( ) Stable
- ( ) in-partition

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 20 of 30 (Start time: 11:13:18 PM, 04 January 2021)

Total Marks: 1

Fibonacci Sequence was named on _____, a famous mathematician in 12th Century.

Select the correct option

- ○ Fred Brooks
- ○ Grady Booch
- ● Leonardo Pisano
- ○ Edgar F. Codd

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 21 of 30 (Start time: 11:13:31 PM, 04 January 2021)

Total Marks: 1

Edit distance algorithm based on_____strategy.

Select the correct option

- Greedy
- Dynamic Programming
- Divide and Conquer
- Brute force

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 22 of 30 (Start time: 11:14:43 PM, 04 January 2021)

Total Marks: 1

Pseudo code of algorithms are to be read by _____.

Select the correct option

- [x] People
- [ ] RAM
- [ ] Computer
- [ ] Compiler

Question # 23 of 30 (Start time: 11:15:08 PM, 04 January 2021)

Total Marks: 1

The only way to convert an empty string into a string of j characters is by doing j insertions, represented as _____.

Select the correct option

- E(i, j) = I
- E(i, 0) = i
- E(0, j) = j
- E(1, j) = j

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 24 of 30 (Start time: 11:16:12 PM, 04 January 2021)

Total Marks: 1

Random Access Machine (RAM) can execute _____ instructions.

Select the correct option

- Only logical
- Parallel
- Only arithmetic
- Logical and arithmetic

Question # 25 of 30 (Start time: 11:16:42 PM, 04 January 2021)

Total Marks: 1

Find the maximum value of the items which can carry using knapsack. Knapsack weight capacity = 50.

Item	Weight	Value
1	10	70
2	20	20
3	30	80
4	70	200

Select the correct option

- ○ 280
- ● 100
- ○ 90
- ○ 200

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 26 of 30 (Start time: 11:18:24 PM, 04 January 2021)

Total Marks: 1

An algorithm is a mathematical entity, which is independent of _____.

Select the correct option

- ○ Programming language
- ○ Machine and Programming language
- ○ Compiler and Programming language
- ● Programming language, Compiler and Machine

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 27 of 30 (Start time: 11:19:10 PM, 04 January 2021)

Total Marks: 1

Cubic function will _____ a quadratic function.

Select the correct option

- prove
- be equal to
- overtake
- find

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 28 of 30 (Start time: 11:20:13 PM, 04 January 2021)

Total Marks: 1

_____ algorithm based on Dynamic Programming strategy.

Select the correct option

- Heap Sort
- Binary Tree
- Quick Sort
- Edit distance

Question # 29 of 30 (Start time: 11:21:46 PM, 04 January 2021)

Total Marks: 1

The average case running time of quick sort algorithm is theta _____.

Select the correct option

- Log(n)
- (n)
- nlog(n)
- n x n log(n)

CS502:Grand Quiz

Quiz Start Time: 10:48 PM, 04 January 2021

Question # 30 of 30 (Start time: 11:22:32 PM, 04 January 2021)

Total Marks: 1

If the time complexity of an algorithm is O(n), then it is called _____ time complexity.

Select the correct option

- (●) Linear
- ( ) Constant
- ( ) Average
- ( ) Exponential