



Cs502 today midterm grand quiz

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Question # 8 of 30 (Start time: 05:39:14 AM, 27 June 2020)

We associate (x, y) integers pair to cars where x is the speed of the car and y is the negation of the price. High y value for a car

Select the correct option



Fast



Slow



Expensive



Cheap

Question # 9 of 30 (Start time: 05:40:47 AM, 27 June 2020)

In Fibonacci Sequence, each term is calculated by _____ previous _____ terms.

Select the correct option

- | | |
|-----------------------|------------------|
| <input type="radio"/> | Subtracting, Two |
| <input type="radio"/> | Adding, Three |
| <input type="radio"/> | Adding, Two |
| <input type="radio"/> | Multiplying, Two |

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Question # 10 of 30 (Start time: 05:42:22 AM, 27 June 2020)

_____ is one of the few problems, where provable lower bounds exist on how fast we can sort.

Select the correct option

- | | |
|-----------------------|--------------------------|
| <input type="radio"/> | Searching |
| <input type="radio"/> | Sorting |
| <input type="radio"/> | Both Searching & Sorting |
| <input type="radio"/> | Graphing |

Question # 11 of 30 (Start time: 05:44:21 AM, 27 June 2020)

To find maximal points in brute-force algorithm, each point of the space is compared against _____

Select the correct option



One other point



All other points



Few other points



Most of the other points

Question # 12 of 30 (Start time: 05:45:56 AM, 27 June 2020)

If p_j dominates p_i and p_i dominates p_h then p_j also dominates p_h . It means dominance relation is _____

Select the correct option

- | | |
|-----------------------|----------------|
| <input type="radio"/> | Transitive |
| <input type="radio"/> | Non Transitive |
| <input type="radio"/> | Equation |
| <input type="radio"/> | Symbolic |

Question # 14 of 30 (Start time: 05:48:03 AM, 27 June 2020)

The sequence of merge sort algorithm is:

Select the correct option



Divide-Combine-Conquer



Conquer-Divide-Combine



Divide-Conquer-Combine



Combine-Divide-Conquer

Question # 13 of 30 (Start time: 05:46:33 AM, 27 June 2020)

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

Select the correct option

- | | |
|-----------------------|------------------------------|
| <input type="radio"/> | Not in-place, not stable one |
| <input type="radio"/> | In-place, not stable one |
| <input type="radio"/> | In-place, stable one |
| <input type="radio"/> | Not in-place, stable one |

Question # 15 of 30 (Start time: 05:48:57 AM, 27 June 2020)

Approach of solving geometric problems by sweeping a line across the plane is called _____ sweep.

Select the correct option

- | | |
|-----------------------|-------|
| <input type="radio"/> | Line |
| <input type="radio"/> | Plane |
| <input type="radio"/> | Cube |
| <input type="radio"/> | Box |

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Question # 16 of 30 (Start time: 05:50:39 AM, 27 June 2020)

In Dynamic Programming approach, we do not store the solution to each sub-problem in case n

Select the correct option

- True
- False

Question # 17 of 30 (Start time: 05:52:26 AM, 27 June 2020)

Edit distance algorithm based on strategy.

Select the correct option

- | | |
|-----------------------|---------------------|
| <input type="radio"/> | Greedy |
| <input type="radio"/> | Dynamic Programming |
| <input type="radio"/> | Divide and Conquer |
| <input type="radio"/> | Searching |

Question # 18 of 30 (Start time: 05:53:42 AM, 27 June 2020)

The running time of Quick sort algorithm _____

Select the correct option

- Is impossible to compute
- Has nothing to do with pivot selection
- Is Random upon each execution
- Greatly influenced by the selection of pivot

Question # 19 of 30 (Start time: 05:54:45 AM, 27 June 2020)

In Heap Sort algorithm, the maximum levels an element can move upward is _____

Select the correct option

- | | |
|-----------------------|---------------------------|
| <input type="radio"/> | Theta ($\log n$) |
| <input type="radio"/> | Order ($\log n$) |
| <input type="radio"/> | Omega ($\log n$) |
| <input type="radio"/> | $O(1)$ i.e. Constant time |

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Question # 20 of 30 (Start time: 05:56:14 AM, 27 June 2020)

_____ overcomes the limitations of _____ by working as per positional notations of numbers.

Select the correct option

- Counting sort, Radix sort
- Radix sort, Counting sort

Question # 21 of 30 (Start time: 05:57:53 AM, 27 June 2020)

In plane sweep approach of solving geometric problems, a _____ is swept across the plane.

Select the correct option



Line



Plane



Cube



Box

(Start time: 05:58:49 AM, 27 June 2020)

The sieve technique is a special case, where the number of sub-problems is just _____

Select the correct option

- 1
- 2
- 3
- 4

Question # 23 of 30 (Start time: 05:59:57 AM, 27 June 2020)

In _____ we have to find rank of an element from given input.

Select the correct option

- | | |
|-----------------------|-----------------------|
| <input type="radio"/> | Merge sort algorithm |
| <input type="radio"/> | Selection problem |
| <input type="radio"/> | Brute force technique |
| <input type="radio"/> | Plane Sweep algorithm |

Question # 24 of 30 (Start time: 06:00:49 AM, 27 June 2020)

Quick sort algorithm was developed by _____

Select the correct option

- | | |
|-----------------------|------------------------|
| <input type="radio"/> | Alfred Aho |
| <input type="radio"/> | Sedgewick |
| <input type="radio"/> | John Vincent Atanasoff |
| <input type="radio"/> | Tony Hoare |

Question # 25 of 30 (Start time: 06:02:09 AM, 27 June 2020)

Sorting is performed on the basis of _____

Select the correct option

- | | |
|-----------------------|-----------------------------|
| <input type="radio"/> | Computational resources |
| <input type="radio"/> | Asymptotic notation |
| <input type="radio"/> | Summation |
| <input type="radio"/> | Some key value or attribute |

Question # 26 of 30 (Start time: 06:03:53 AM, 27 June 2020)

_____ is a linear time sorting algorithm.

Select the correct option

Merge sort

Radix sort

Quick sort

Bubble sort

Question # 27 of 30 (Start time: 06:06:04 AM, 27 June 2020)

In Heap Sort algorithm, we build _____ for ascending sort.

Select the correct option

- | | |
|-----------------------|----------|
| <input type="radio"/> | Max heap |
| <input type="radio"/> | Min heap |

Question # 28 of 30 (Start time: 06:07:19 AM, 27 June 2020)

In Fibonacci Sequence, unnecessary repetitions do not exist at all.

Select the correct option

True

False

Question # 29 of 30 (Start time: 06:08:41 AM, 27 June 2020)

If there are $\Theta(n^2)$ entries in edit distance matrix then each entry $E(i, j)$ takes _____ time to compute.

Select the correct option

- $\Theta(n)$
- $\Theta(n^2)$
- $\Theta(1)$
- $\Theta(n \log n)$

Question # 30 of 30 (Start time: 06:09:44 AM, 27 June 2020)

What time does Merge Sort algorithm take in order to sort an array of 'n' numbers?

Select the correct option

- | | |
|-----------------------|--------------------|
| <input type="radio"/> | $\Theta(n)$ |
| <input type="radio"/> | $\Theta(\log n)$ |
| <input type="radio"/> | $\Theta(n^2)$ |
| <input type="radio"/> | $\Theta(n \log n)$ |

In selection problem, the rank of an element will be its _____ position if we sort the input data.

Select the correct option

- first
- final
- Second last
- Last

We can make _____ recursive calls in Fibonacci Sequence.

Select the correct option

- Infinite
- Finite

In Heap Sort algorithm (using max heap), when every time maximum element is removed from top _____

Select the correct option

- We call merge Sort algorithm
- It becomes Order n^2 Algorithm
- Divide and Conquer strategy helps us
- We are left with a hole

Dynamic Programming strategy is useful when sub-problems are independent.

Select the correct option

- True
- False

In order to say anything meaningful about our algorithms, it will be important for us to settle on a _____.

Select the correct option

- Java Program
- C++ Program
- Pseudo program
- Mathematical model of computation

Counting sort assumes that the numbers to be sorted are in the range _____.

Select the correct option

- k to n where n is large
- 1 to k where k is small
- k to n where k is small
- k to n where n is small

Boolean operation is a _____ operation on an idealized RAM model of computation.

Select the correct option

- Starting
- Basic
- Advance
- Normal