

National Testing Agency

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Design and Analysis of algorithms

Group Number :	1
Group Id :	899514212
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Show Attended Group? :	No
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Break time :	0
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Is this Group for Examiner? :	No

Design and Analysis of algorithms

Section Id :	899514292
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	97
Number of Questions to be attempted :	97

Section Marks : 100
Mark As Answered Required? : Yes
Sub-Section Number : 1
Sub-Section Id : 899514342
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 89951418102 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

Which of the following is not an example of an algorithm?

1. Lyrics of a musical song.
2. Cooking recipes.
3. Assembly instructions for appliances and toys.
4. Precise directions to reach a friend's house.

Options :

89951470798. 1
89951470799. 2
89951470800. 3
89951470801. 4

Question Number : 2 Question Id : 89951418103 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

The word algorithm comes from the name of a/an_____

1. Russian author
2. Chinese author
3. Persian author
4. Indian author

Options :

89951470802. 1
89951470803. 2
89951470804. 3
89951470805. 4

Question Number : 3 Question Id : 89951418104 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

The four basic arithmetic operations on integers: addition, subtraction, multiplication and division, usually take a/an _____ amount of time

1. Fixed
2. Variable
3. Exponential
4. Quadratic

Options :

89951470806. 1
89951470807. 2
89951470808. 3
89951470809. 4

Question Number : 4 Question Id : 89951418105 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

Space complexity of an algorithm quantifies the amount of space or memory taken by an algorithm to run as a function of the _____

1. amount of space
2. length of the input
3. time taken
4. size of an algorithm

Options :

89951470810. 1
89951470811. 2
89951470812. 3
89951470813. 4

Question Number : 5 Question Id : 89951418106 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

The inequation $O(1) < O(\log n) < O(n) < O(n \log n) < O(n^2) < O(n^3) < O(2^n)$ is

1. True
2. False
3. Depends on the algorithm
4. None of the above

Options :

89951470814. 1
89951470815. 2
89951470816. 3
89951470817. 4

Question Number : 6 Question Id : 89951418107 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

If $f(x) = (x^3 - 1) / (3x + 1)$, then $f(x)$ is of the order?

1. x^2
2. x
3. $x^2 / 3$
4. 1

Options :

89951470818. 1
89951470819. 2
89951470820. 3
89951470821. 4

Question Number : 7 Question Id : 89951418108 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

For the functions, n^k and c^n , what is the asymptotic relationship between these functions?

Assume that $k \geq 1$ and $c > 1$ are constants

1. $n^k = O(c^n)$
2. $n^k = \Theta(c^n)$
3. $n^k = \Omega(c^n)$
4. None of the above

Options :

89951470822. 1
89951470823. 2
89951470824. 3
89951470825. 4

Question Number : 8 Question Id : 89951418109 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What does it mean, when we say that an algorithm X is asymptotically more efficient than Y?

1. X will always be a better choice for small inputs
2. X will always be a better choice for large inputs
3. Y will always be a better choice for small inputs
4. X will always be a better choice for all inputs

Options :

89951470826. 1
89951470827. 2
89951470828. 3
89951470829. 4

Question Number : 9 Question Id : 89951418110 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

For any two functions $f(n)$ and $g(n)$, we have $f(n) = \Theta(g(n))$ if and only if

1. $g(n) = O(f(n))$ and $f(n) = \Omega(g(n))$
2. $f(n) = O(g(n))$ and $g(n) = \Omega(f(n))$
3. $f(n) = O(g(n))$ and $f(n) = \Omega(g(n))$
4. None of the above

Options :

89951470830. 1
89951470831. 2
89951470832. 3
89951470833. 4

Question Number : 10 Question Id : 89951418111 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

If $n^3 + n^2 + 16 = n^2 + \Theta(n^2)$, then there is some function $f(n) \in \Theta(n^2)$ such that

1. $n^3 + n^2 + 16 = n^3 + \Theta(n) \forall n$
2. $n^3 + n^2 + 16 = \Theta(n) + f(n) \forall n$
3. $n^3 + n^2 + 16 = n^3 + f(n) \forall n$
4. $n^3 + n^2 + 16 = \Theta(n^3) \forall n$

Options :

89951470834. 1
89951470835. 2
89951470836. 3
89951470837. 4

Question Number : 11 Question Id : 89951418112 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Given, $f(n)$, $g(n)$, & $h(n)$, we can say that $f(n) = \Omega(h(n))$, if

1. $f(n) = O(g(n))$ and $g(n) = O(h(n))$
2. $f(n) = \Omega(g(n))$ and $g(n) = \Omega(h(n))$
3. $f(n) = \Theta(g(n))$ and $g(n) = \Omega(h(n))$
4. $f(n) = \Omega(g(n))$ and $g(n) = \Theta(h(n))$

Options :

89951470838. 1
89951470839. 2
89951470840. 3
89951470841. 4

Question Number : 12 Question Id : 89951418113 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

If $f(n) = O(g(n))$, then $g(n) = \Theta(f(n))$

- 1.True
- 2.False
- 3.Depends on 'n'
- 4.Cannot say

Options :

89951470842. 1
89951470843. 2
89951470844. 3
89951470845. 4

Question Number : 13 Question Id : 89951418114 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

$T(n) = T(n/2) + 2^n$, then $T(n) =$

1. $\Theta(n)$
2. $\Theta(\log n)$
3. $\Theta(n \log n)$
4. $\Theta(2^n)$

Options :

89951470846. 1
89951470847. 2
89951470848. 3
89951470849. 4

Question Number : 14 Question Id : 89951418115 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

$T(n) = 16T(n/4) + n$, then $T(n) =$

1. $\Theta(n^2)$
2. $\Theta(\log n)$
3. $\Theta(n \log n)$
4. $\Theta(n \log \log n)$

Options :

89951470850. 1
89951470851. 2
89951470852. 3
89951470853. 4

Question Number : 15 Question Id : 89951418116 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If, $T(n) = T(n/4) + T(n/2) + cn^2$ & $T(1) = c$, $T(0) = 0$, where c is a positive constant. The solution of the above recurrence using recursion tree is

1. $O(n^3)$
2. $O(n^2)$
3. $O(n^2 \log n)$
4. $O(n \log n)$

Options :

89951470854. 1
89951470855. 2
89951470856. 3
89951470857. 4

Question Number : 16 Question Id : 89951418117 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

$T(n) = 4T(n/2) + cn$, then $T(n) =$

1. $\Theta(n)$
2. $\Theta(\log n)$
3. $\Theta(n^2)$
4. $\Theta(n \log \log n)$

Options :

89951470858. 1
89951470859. 2
89951470860. 3
89951470861. 4

Question Number : 17 Question Id : 89951418118 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

$T(n) = 4T(n/2) + n/\log n$, then $T(n) =$

- 1. $\Theta(n^2)$
- 2. $\Theta(\log n)$
- 3. $\Theta(n \log n)$
- 4. $\Theta(n \log \log n)$

Options :

89951470862. 1
89951470863. 2
89951470864. 3
89951470865. 4

Question Number : 18 Question Id : 89951418119 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

If $T(n) = 7T(n/3) + n^2$, then $T(n) =$

- 1. $\Theta(n)$
- 2. $\Theta(n^2)$
- 3. $\Theta(n \log n)$
- 4. $\Theta(n \log \log n)$

Options :

89951470866. 1
89951470867. 2
89951470868. 3
89951470869. 4

Question Number : 19 Question Id : 89951418120 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

If $T(n) = 4T(n/2) + \log n$, then $T(n) =$

1. $\Theta(n)$
2. $\Theta(\log n)$
3. $\Theta(n^2)$
4. $\Theta(n \log \log n)$

Options :

89951470870. 1
89951470871. 2
89951470872. 3
89951470873. 4

Question Number : 20 Question Id : 89951418121 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Suppose $T(n) = 2T(n/2) + n$, $T(0) = T(1) = 1$, Which one of the following is false.

1. $T(n) = O(n^2)$
2. $T(n) = O(n \log n)$
3. $T(n) = O(n^2)$
4. $T(n) = O(n \log n)$

Options :

89951470874. 1
89951470875. 2
89951470876. 3
89951470877. 4

Question Number : 21 Question Id : 89951418122 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The running time of an algorithm is represented by the following recurrence relation:

if $n \leq 3$ then $T(n) = n$

else $T(n) = T(n/3) + cn$

Which one of the following represents the time complexity of the algorithm?

1. $\Theta(n)$

2. $\Theta(n \log n)$

3. $\Theta(n^2)$

4. $\Theta(n^2 \log n)$

Options :

89951470878. 1

89951470879. 2

89951470880. 3

89951470881. 4

Question Number : 22 Question Id : 89951418123 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Given, $T(n) = 4T(n/2) + n \log n$, then $T(n) =$

1. $\Theta(n)$

2. $\Theta(n \log n)$

3. $\Theta(n^2)$

4. $\Theta(n^3)$

Options :

89951470882. 1

89951470883. 2

89951470884. 3

89951470885. 4

Question Number : 23 Question Id : 89951418124 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Master's theorem can be applied on which of the following recurrence relation?

1. $T(n) = 2T(n/2) + 2^n$
2. $T(n) = 2T(n/3) + \sin(n)$
3. $T(n) = T(n-2) + 2n^2 + 1$
4. None of these

Options :

89951470886. 1
89951470887. 2
89951470888. 3
89951470889. 4

Question Number : 24 Question Id : 89951418125 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

$$T(n) = 7T(n/2) + 3n^2 + 2$$

1. $O(n^{2.8})$
2. $O(n^3)$
3. $\theta(n^{2.8})$
4. All of the above

Options :

89951470890. 1
89951470891. 2
89951470892. 3
89951470893. 4

Question Number : 25 Question Id : 89951418126 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

$$T(n) = 5T(n/5) + \sqrt{n}, T(1) = 1, T(0) = 0$$

1. $\Theta(n)$
2. $\Theta(n^2)$
3. $\Theta(\sqrt{n})$
4. $\Theta(n \log n)$

Options :

89951470894. 1

89951470895. 2

89951470896. 3

89951470897. 4

Sub-Section Number :

2

Sub-Section Id :

899514343

Question Shuffling Allowed :

Yes

Question Id : 89951418127 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (26 to 27)

Question Label : Comprehension

Suppose the letters a ,b ,c ,d ,e have frequencies 45,13,12,16,9,5 respectively.

Sub questions

Question Number : 26 Question Id : 89951418128 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following is the Huffman code for the letters a, b, c, d, e?

1. 0,101,001,110,1111,1100
2. 0,101,100,111,1101,1100
3. 1,010, 001,110,1111,1100
4. 1,101, 100,111,111,1100

Options :

89951470898. 1

89951470899. 2

89951470900. 3

89951470901. 4

Question Number : 27 Question Id : 89951418129 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What is the average length or weighted external path length of the correct answer to above question?

1. 1.63
2. 1.55
3. 1.92
4. 2.50

Options :

89951470902. 1
89951470903. 2
89951470904. 3
89951470905. 4

Sub-Section Number :

3

Sub-Section Id :

899514344

Question Shuffling Allowed :

Yes

Question Number : 28 Question Id : 89951418130 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which one of the following is the recurrence equation for the worst case time complexity of the Quick sort algorithm for sorting $n (\geq 2)$ numbers?

1. $T(n) = 2T(n/2) + Cn$ where C is constant.
2. $T(n) = T(n-1) + T(0) + Cn$, where C is constant.
3. $T(n) = 2T(n-2) + Cn$ where C is constant.
4. $T(n) = T(n/2) + Cn$ where C is constant.

Options :

89951470906. 1
89951470907. 2
89951470908. 3
89951470909. 4

Question Number : 29 Question Id : 89951418131 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Let P be a Quicksort Program to sort numbers in ascending order using the first element as pivot. Let T1 and T2 be the number of comparisons made by P for the inputs {5,6,7,8,9} and {8, 5, 9, 7, 6} respectively. Which one of the following holds true?

1. $T1 = 5$
2. $T1 < T2$
3. $T1 > T2$
4. $T1 = T2$

Options :

89951470910. 1
89951470911. 2
89951470912. 3
89951470913. 4

Question Number : 30 Question Id : 89951418132 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Let A, B, C, D, E are sorted sequences having lengths 20, 24, 30, 35, 50 respectively. They are to be merged into a single sequence by merging together two sequences at a time. The number of comparisons that are required in worst case scenario by the optimal algorithm for doing this is ?

1. 258
2. 241
3. 358
4. 158

Options :

89951470914. 1
89951470915. 2
89951470916. 3
89951470917. 4

Question Number : 31 Question Id : 89951418133 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Let capacity of knapsack " m " is $m=20$ and the total number of objects $n=3$. Let $P_1=25$, $P_2=24$, $P_3=15$ be the profits whose weights are $w_1=18$, $w_2=15$, $w_3=10$ respectively. What will be the optimal solution of the given problem using fractional knapsack approach?

1. 20.15
2. 25.59
3. 31.50
4. 40.80

Options :

89951470918. 1
89951470919. 2
89951470920. 3
89951470921. 4

Question Number : 32 Question Id : 89951418134 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following step mainly defines the time complexity of fractional knapsack ?

1. Adding items to knapsack
2. Sorting of items
3. Breaking of items
4. Looping through sorted items.

Options :

89951470922. 1
89951470923. 2
89951470924. 3
89951470925. 4

Sub-Section Number :

4

Sub-Section Id :

899514345

Question Shuffling Allowed :

Yes

Question Id : 89951418135 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (33 to 34)

Question Label : Comprehension

Let J1, J2, J3, J4, J5, J6 be the jobs and each job requires one unit of execution. Each job has its respective profit and deadlines as shown in the table below.

Job	J1	J2	J3	J4	J5	J6
Profit	200	180	190	300	120	100
Deadline	5	3	3	2	4	2

Sub questions

Question Number : 33 Question Id : 89951418136 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The maximum value of profit that can be earned is ?

1. 880
2. 785
3. 990
4. 1150

Options :

89951470926. 1
89951470927. 2
89951470928. 3
89951470929. 4

Question Number : 34 Question Id : 89951418137 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following job left out in the schedule will give maximum profit ?

1. All the tasks are completed
2. J1 and J3 are left out
3. J4 and J6 are left out
4. Only J6 is left out

Options :

89951470930. 1
89951470931. 2

89951470932. 3

89951470933. 4

Sub-Section Number :

5

Sub-Section Id :

899514346

Question Shuffling Allowed :

Yes

Question Id : 89951418138 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (35 to 36)

Question Label : Comprehension

Let number of programs $n=3$ and $(l_1, l_2, l_3) = (2, 5, 4)$ be lengths of programs respectively.

Sub questions

Question Number : 35 Question Id : 89951418139 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What will be the mean retrieval time for orders $(2, 3, 1)$ and $(3, 1, 2)$

1. $19/3$ and $20/3$
2. $25/3$ and $21/3$
3. $23/3$ and $22/3$
4. Both the orders have same mean retrieval time of $17/3$

Options :

89951470934. 1

89951470935. 2

89951470936. 3

89951470937. 4

Question Number : 36 Question Id : 89951418140 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which among 6 possible orders in above question gives maximum mean retrieval time?

1. 3,1,2
2. 2,1,3
3. 2,3,1
4. 1,3,2

Options :

89951470938. 1

89951470939. 2

89951470940. 3

89951470941. 4

Sub-Section Number :

6

Sub-Section Id :

899514347

Question Shuffling Allowed :

Yes

Question Number : 37 Question Id : 89951418141 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The advantage of selecting MAXMIN algorithm using divide and conquer method compared to straight MAXMIN algorithm is

1. High time complexity and high accuracy
2. Less space complexity and high accuracy
3. Only Less time complexity
4. Less space complexity and high accuracy

Options :

89951470942. 1

89951470943. 2

89951470944. 3

89951470945. 4

Question Number : 38 Question Id : 89951418142 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

For MAXMIN algorithm using divide and conquer method, the number of comparisons of elements required in worst case is?

1. n
2. $n/4$
3. $(3n)/2-2$
4. $n-1$

Options :

89951470946. 1

89951470947. 2

89951470948. 3

89951470949. 4

Question Number : 39 Question Id : 89951418143 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following is the correct code for merge sort

```
1.
void merge_sort(int arr[], int left, int right)
{
    if (left > right)
    {
        int mid = (right-left)/2;
        merge_sort(arr, left, mid);
        merge_sort(arr, mid+1, right);

        merge(arr, left, mid, right); //function to merge sorted arrays
    }
}

2.
void merge_sort(int arr[], int left, int right)
{
    if (left < right)
    {
        int mid = left+(right-left)/2;
        merge_sort(arr, left, mid);
        merge_sort(arr, mid+1, right);
        merge(arr, left, mid, right); //function to merge sorted arrays
    }
}

3.
void merge_sort(int arr[ ], int left, int right)
{
    if (left < right)
    {

        int mid = left+(right-left)/2;
        merge(arr, left, mid, right); //function to merge sorted arrays
        merge_sort(arr, left, mid);
        merge_sort(arr, mid+1, right);
    }
}

4.
void merge_sort(int arr[], int left, int right)
{
    if (left < right)
    {
        int mid = (right-left)/2;
        merge(arr, left, mid, right); //function to merge sorted arrays
        merge_sort(arr, left, mid);
        merge_sort(arr, mid+1, right);
    }
}
```

Options :

89951470950. 1
89951470951. 2
89951470952. 3
89951470953. 4

Question Number : 40 Question Id : 89951418144 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Choose the incorrect statement about the merge sort from the following ?

1. It is a comparison based sort.
2. It is an adaptive algorithm.
3. It is not an in place algorithm.
4. It is a stable algorithm.

Options :

89951470954. 1
89951470955. 2
89951470956. 3
89951470957. 4

Question Number : 41 Question Id : 89951418145 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is not the variant of merge sort?

1. Top down merge sort
2. Bottom up merge sort
3. Linear merge sort
4. In-place merge sort

Options :

89951470958. 1
89951470959. 2
89951470960. 3
89951470961. 4

Question Number : 42 Question Id : 89951418146 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Consider the following message: *aabbbbabccddccccbbdd*

If Huffman tree coded as left child with '0' and right child with '1' from every node then what is the decoded message for 110100?

Options :

- 89951470962. 1
- 89951470963. 2
- 89951470964. 3
- 89951470965. 4

Question Number : 43 Question Id : 89951418147 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

For an array of n elements and implementing quicksort on it by always choosing the central element as pivot, the tightest upper bound for the worst case scenario shall be

- 1. $O(n^2)$
- 2. $O(n \log n)$
- 3. $\Theta(n \log n)$
- 4. $O(n^3)$

Options :

- 89951470966. 1
- 89951470967. 2
- 89951470968. 3
- 89951470969. 4

Question Number : 44 Question Id : 89951418148 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

An array of “n” numbers is given, where n is an even number. The maximum as well as the minimum of these n numbers needs to be determined. Which of the following is TRUE about the no. of comparisons needed?

1. Atleast $2n-1$ comparisons are needed
2. Atmost $\frac{3}{2}n-2$ comparisons are needed
3. Atleast $n \log_2 n$ comparisons are needed
4. None of the above

Options :

89951470970. 1

89951470971. 2

89951470972. 3

89951470973. 4

Question Number : 45 Question Id : 89951418149 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following represents the correct match for the given lists?

List –I

List-II

- | | |
|------------------------|-----------------------|
| 1. Merge sort | A. Greedy method |
| 2. Binary search | B. $O(n \log n)$ |
| 3. Huffman coding | C. Divide and conquer |
| 4. Fractional knapsack | D. Prefix codes |

1. a. 1-C, 2-B, 3- D, 4-A
2. b. 1-B, 2-C, 3- A, 4-D
3. c. 1-B, 2-C, 3- D, 4-A
4. d. 1-C, 2-B, 3- A, 4-D

Options :

89951470974. 1

89951470975. 2

89951470976. 3

89951470977. 4

Question Number : 46 Question Id : 89951418150 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following is not the application of binary search?

1. Debugging
2. Union of intervals
3. To find lower or upper bound in an ordered sequence
4. To search in unordered list

Options :

89951470978. 1

89951470979. 2

89951470980. 3

89951470981. 4

Question Number : 47 Question Id : 89951418151 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The recurrence relation of binary search is

1. $T(n) = T(n/2) + \log(n)$
2. $T(n) = 2T(n/2) + k$, where k is a constant c .
3. $T(n) = T(n/2) + 1$
4. $T(n) = T(n/2)$

Options :

89951470982. 1

89951470983. 2

89951470984. 3

89951470985. 4

Question Number : 48 Question Id : 89951418152 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The order of a binary search algorithm is

1. n
2. n^2
3. $n \log n$
4. $\log n$

Options :

89951470986. 1

89951470987. 2

89951470988. 3

89951470989. 4

Question Number : 49 Question Id : 89951418153 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is correct?

1. Fractional knapsack problem can be solved in $O(n)$ time.
2. Fractional knapsack isn't a greedy based approach.
3. Objective of fractional knapsack is to maximize the total value in the knapsack.
4. None of these

Options :

89951470990. 1

89951470991. 2

89951470992. 3

89951470993. 4

Question Number : 50 Question Id : 89951418154 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The lower bound on the number of comparisons performed by comparison- based sorting algorithm is

1. $\Omega(1)$
2. $\Omega(n^2 \log n)$
3. $\Omega(n^2)$
4. $\Omega(n \log n)$

Options :

89951470994. 1

89951470995. 2

89951470996. 3

89951470997. 4

Question Number : 51 Question Id : 89951418155 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Dynamic programming is best suited to problems which possess _____ :

1. Disjoint sub-problems
2. Unique solution
3. Multiple solutions
4. Overlapping sub-problems

Options :

89951470998. 1
89951470999. 2
89951471000. 3
89951471001. 4

Question Number : 52 Question Id : 89951418156 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Dynamic programming is better than Divide and Conquer because it _____

1. Uses less memory
2. Involves lesser computation
3. Gives the correct answer
4. None of the above

Options :

89951471002. 1
89951471003. 2
89951471004. 3
89951471005. 4

Question Number : 53 Question Id : 89951418157 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A multistage graph has _____ node(s) in the first stage and _____ node(s) in the last stage

1. n, m
2. 1, n
3. 1, 1
4. $n, 1$

Options :

89951471006. 1

89951471007. 2

89951471008. 3

89951471009. 4

Question Number : 54 Question Id : 89951418158 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The recurrence

$$cost(i, j) = \min_{\substack{l \in V_{i+1} \\ \langle j, l \rangle \in E}} \{c(j, l) + cost(i + 1, l)\} \quad \text{for solving the multistage graph problem with } k$$

stages using bottom-up dynamic programming approach involves starting with values $i = \underline{\hspace{2cm}}$ and

all $j \in \underline{\hspace{2cm}}$

1. $k-2, V_{k-2}$

2. k, V_k

3. $1, V_1$

4. $1, V_{k-1}$

Options :

89951471010. 1

89951471011. 2

89951471012. 3

89951471013. 4

Question Number : 55 Question Id : 89951418159 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The naive recursive approach used for finding the solution to the Longest Common Sub-sequence problem takes $\underline{\hspace{2cm}}$ time for two sequences of length n and m respectively

1. $O(2^{m+n})$

2. $O(n \times m)$

3. $O(n2^m)$

4. $O(n \log m)$

Options :

89951471014. 1

89951471015. 2

89951471016. 3

89951471017. 4

Question Number : 56 Question Id : 89951418160 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

Besides finding the length of the Longest Common Sub-sequence, the Dynamic Programming solution can generate the sub-sequence itself by _____

1. Displaying the characters periodically
2. using a stack
3. using additional matrix to store direction flags
4. using a queue

Options :

89951471018. 1
89951471019. 2
89951471020. 3
89951471021. 4

Question Number : 57 Question Id : 89951418161 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

The Floyd Warshall's algorithms for finding the all pairs shortest paths in a graph uses _____.

1. Greedy Approach
2. Dynamic Programming
3. Simple Divide and Conquer
4. Branch and Bound approach

Options :

89951471022. 1
89951471023. 2
89951471024. 3
89951471025. 4

Question Number : 58 Question Id : 89951418162 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

The number of nested loops in Floyd Warshall's algorithm is _____.

1. 3
2. 4
3. 5
4. 6

Options :

89951471026. 1
89951471027. 2
89951471028. 3
89951471029. 4

Question Number : 59 Question Id : 89951418163 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In what manner is a state-space tree for a backtracking algorithm constructed?

1. Depth-First Search
2. Breadth-First Search
3. Twice around the tree
4. Nearest Neighbor First

Options :

89951471030. 1
89951471031. 2
89951471032. 3
89951471033. 4

Question Number : 60 Question Id : 89951418164 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Backtracking aims to find solution(s) to a given problem by building a _____

1. Partial state space tree
2. Directed multigraph
3. Binary search tree
4. Min heap

Options :

89951471034. 1
89951471035. 2

89951471036. 3

89951471037. 4

Question Number : 61 Question Id : 89951418165 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In the N-Queens problem, two queens (i, j) and (k, l) lie on the same diagonal iff _____

1. $|j - l| = |i - k|$
2. $|i - j| = |k - l|$
3. $j + k = i + l$
4. $|j - k| = |i - l|$

Options :

89951471038. 1

89951471039. 2

89951471040. 3

89951471041. 4

Question Number : 62 Question Id : 89951418166 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

All leaf nodes in the state space tree generated by backtracking that do not appear at the level equal to the height of the tree represent _____.

1. Feasible solution nodes
2. Killed nodes
3. Solution nodes
4. Backtrack nodes

Options :

89951471042. 1

89951471043. 2

89951471044. 3

89951471045. 4

Question Number : 63 Question Id : 89951418167 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The size of COVID-19 virus is 160 nm. After adding the contaminated sample with multiple anti-viral proteins/ compounds of sizes [2 7 9 13 25 40 65 72 83] nm respectively, the resulting size of the virus-protein blob is found out to be 250 nm. To find the compounds which may have adhered to the virus, the problem can be modeled as _____ and solved using _____

1. Optimization problem, Greedy approach
2. Sum-of-subsets, Backtracking
3. Decision problem, Dynamic Programming
4. Easy problem, Social distancing

Options :

89951471046. 1
89951471047. 2
89951471048. 3
89951471049. 4

Question Number : 64 Question Id : 89951418168 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A solution to the combinatorial problem like the subset sum problem can be represented in the form of

- _____
1. fixed tuple solution
 2. variable tuple solution
 3. three tuple solution
 4. both a and b

Options :

89951471050. 1
89951471051. 2
89951471052. 3
89951471053. 4

Question Number : 65 Question Id : 89951418169 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In order to protect yourself and others from COVID-19 you can purchase commodities worth Rs 100 which include [mask soap sanitizer gloves tissue]. Each of these commodities has significance value [10 8 6 4 1] and cost [50 20 40 30 10] respectively. This problem can be modeled as _____ and solved using _____.

1. Combinatorial problem, Greedy Method
2. Knapsack Problem, Greedy Method
3. 0/1 Knapsack problem, Backtracking
4. Easy problem, Social distancing

Options :

- 89951471054. 1
- 89951471055. 2
- 89951471056. 3
- 89951471057. 4

Question Number : 66 Question Id : 89951418170 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

0/1 Knapsack problem is different from fractional Knapsack as in the 0/1 case the weights of items added to the knapsack are _____

1. Full
2. Fractional
3. Half
4. Zero

Options :

- 89951471058. 1
- 89951471059. 2
- 89951471060. 3
- 89951471061. 4

Question Number : 67 Question Id : 89951418171 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Branch and Bound method searches the state space tree using _____ search

1. Depth first
2. Breadth first
3. Random
4. Both 1& 2

Options :

- 89951471062. 1
- 89951471063. 2
- 89951471064. 3
- 89951471065. 4

Question Number : 68 Question Id : 89951418172 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

While searching for a minimum cost solution for a problem using Branch and Bound, the nodes for which _____ are killed and thus not explored further

- 1. upper bound is greater than lower bound
- 2. lower bound is equal to the upper bound
- 3. upper bound and lower bound are negative
- 4. lower bound is greater than upper bound

Options :

- 89951471066. 1
- 89951471067. 2
- 89951471068. 3
- 89951471069. 4

Question Number : 69 Question Id : 89951418173 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The running time performance of Least Cost Branch and Bound can be improved if the list of active nodes are maintained using a _____ on their lower bound

- 1. Min heap
- 2. Max heap
- 3. Binary search tree
- 4. AVL tree

Options :

- 89951471070. 1
- 89951471071. 2
- 89951471072. 3
- 89951471073. 4

Question Number : 70 Question Id : 89951418174 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

While staying home due to COVID-19 lockdown, you want to spend 24 hours such that you get less bored while performing different activities like [sleep eat videogame chat tv study clean pray cook gardening music].

The time duration in hours of the different activities are [8 1 3 3 3 5 1 1 4 1 3] and the boring score (small value meaning less boring) of each of these activities is [3 3 2 1 2 3 4 4 4 4]. This problem of finding the different sets of activities to be performed in 24 hours so as to feel less bored can be modeled as _____ problem and solved using _____.

1. Maximization, Greedy approach
2. Maximization, Branch and Bound
3. Minimization, Least Cost Branch & Bound
4. Easy, Chatting

Options :

89951471074. 1
89951471075. 2
89951471076. 3
89951471077. 4

Question Number : 71 Question Id : 89951418175 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

_____ is/are the common search strategies associated with Branch and Bound technique

1. FIFO
2. LIFO
3. Both 1& 2
4. None of the above

Options :

89951471078. 1
89951471079. 2
89951471080. 3
89951471081. 4

Question Number : 72 Question Id : 89951418176 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

Stack data structure is used with _____ Branch and Bound search

1. FIFO
2. LIFO
3. Both 1& 2
4. None of the above

Options :

89951471082. 1
89951471083. 2
89951471084. 3
89951471085. 4

Question Number : 73 Question Id : 89951418177 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Selection rule for the next E-node is rigid and blind in _____ Branch and Bound technique(s).

1. FIFO
2. LIFO
3. Both 1& 2
4. None of the above

Options :

89951471086. 1
89951471087. 2
89951471088. 3
89951471089. 4

Question Number : 74 Question Id : 89951418178 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What happens when the backtracking algorithm reaches a complete solution

1. It backtracks to the root
2. It continues searching for other possible solutions
3. It traverses from a different route
4. None of the above

Options :

89951471090. 1
89951471091. 2

89951471092. 3

89951471093. 4

Question Number : 75 Question Id : 89951418179 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is the longest common subsequence between the strings “hbcfgmnapq” and “cbhgrsfmq” ?

1. hgmq
2. cfmq
3. bfmq
4. fgmna

Options :

89951471094. 1

89951471095. 2

89951471096. 3

89951471097. 4

Question Number : 76 Question Id : 89951418180 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Two main measures for the efficiency of an algorithm are

- 1.Processor and memory
- 2.Complexity and capacity
- 3.Time and space
4. Data and space

Options :

89951471098. 1

89951471099. 2

89951471100. 3

89951471101. 4

Question Number : 77 Question Id : 89951418181 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which method consists of simply counting the number of inputs that must be examined and the number of outputs that must be produced?

1. Trivial Method
2. Information Theory
3. Decision Tree
4. Problem Reduction

Options :

89951471102. 1
89951471103. 2
89951471104. 3
89951471105. 4

Question Number : 78 Question Id : 89951418182 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The transformation of a problem X into a simpler problem Y is known as: ?

1. Problem Transformation
2. Problem Reduction
3. Problem Simplification
4. None of the above

Options :

89951471106. 1
89951471107. 2
89951471108. 3
89951471109. 4

Question Number : 79 Question Id : 89951418183 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The lower bound of any comparison based search from a list of n elements cannot be less than

1. n^2
2. $n \log n$
3. n
4. $\log n$

Options :

- 89951471110. 1
- 89951471111. 2
- 89951471112. 3
- 89951471113. 4

Question Number : 80 Question Id : 89951418184 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

P is a set of relatively

- 1. Hard problems
- 2. Average problems
- 3. Easy problems
- 4. None of the above

Options :

- 89951471114. 1
- 89951471115. 2
- 89951471116. 3
- 89951471117. 4

Question Number : 81 Question Id : 89951418185 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

NP stands for

- 1. Non Polynomial Time
- 2. No Polynomial Time
- 3. Non-deterministic Polynomial Time
- 4. None of the above

Options :

- 89951471118. 1
- 89951471119. 2
- 89951471120. 3
- 89951471121. 4

Question Number : 82 Question Id : 89951418186 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

P is set of problems that can be solved by a _____ Turing machine in Polynomial time.

1. Non-deterministic
2. Deterministic
3. Both 1 & 2
4. None of the above

Options :

89951471122. 1
89951471123. 2
89951471124. 3
89951471125. 4

Question Number : 83 Question Id : 89951418187 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A lucky algorithm makes

1. Wrong guess
2. Right guess
3. Probable guess
4. All of the above

Options :

89951471126. 1
89951471127. 2
89951471128. 3
89951471129. 4

Question Number : 84 Question Id : 89951418188 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

NP is set of decision problems that can be solved by a _____ Turing Machine in _____ time.

1. Deterministic & Non-Polynomial
2. Non- Deterministic & Non-Polynomial
3. Non-Deterministic & Polynomial
4. Deterministic & Polynomial

Options :

89951471130. 1
89951471131. 2

89951471132. 3

89951471133. 4

Question Number : 85 Question Id : 89951418189 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Problems that cannot be solved by any algorithm are called?

1. Tractable problems
2. Intractable problems
3. Undecidable problems
4. Decidable problems

Options :

89951471134. 1

89951471135. 2

89951471136. 3

89951471137. 4

Question Number : 86 Question Id : 89951418190 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

NP problems are verifiable in

1. Non-Polynomial Time
2. Polynomial Time
3. Infinite Time
4. None of the above

Options :

89951471138. 1

89951471139. 2

89951471140. 3

89951471141. 4

Question Number : 87 Question Id : 89951418191 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

How many stages of procedure does a non-deterministic algorithm consist of?

- 1. 2
- 2. 3
- 3. 4
- 4. 5

Options :

- 89951471142. 1
- 89951471143. 2
- 89951471144. 3
- 89951471145. 4

Question Number : 88 Question Id : 89951418192 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A 3-SAT problem consists of at most ____ literals in every clause

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Options :

- 89951471146. 1
- 89951471147. 2
- 89951471148. 3
- 89951471149. 4

Question Number : 89 Question Id : 89951418193 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

An optimization problem is the problem of finding the _____ solution from all feasible solutions

- 1. Worst
- 2. Average
- 3. Best
- 4. None of the above

Options :

- 89951471150. 1
- 89951471151. 2

89951471152. 3

89951471153. 4

Question Number : 90 Question Id : 89951418194 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

“We may no longer require that the problem be solved in polynomial time” is relaxed in

1. Super-polynomial time heuristics
2. Approximation Algorithms
3. Probabilistic analysis of heuristics
4. All of the above

Options :

89951471154. 1

89951471155. 2

89951471156. 3

89951471157. 4

Question Number : 91 Question Id : 89951418195 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

“We always find the optimal solution” is dropped in

1. Super-polynomial time heuristics
2. Approximation Algorithms
3. Probabilistic analysis of heuristics
4. All of the above

Options :

89951471158. 1

89951471159. 2

89951471160. 3

89951471161. 4

Question Number : 92 Question Id : 89951418196 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Vertex Cover is a _____ type of problem

1. NP
2. NP-Hard
3. NP-Complete
4. P

Options :

89951471162. 1
89951471163. 2
89951471164. 3
89951471165. 4

Question Number : 93 Question Id : 89951418197 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Minimum spanning tree is the spanning tree with _____

1. Min Cost
2. Max Cost
3. Average Cost
4. None of the above

Options :

89951471166. 1
89951471167. 2
89951471168. 3
89951471169. 4

Question Number : 94 Question Id : 89951418198 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Triangle inequality is?

1. $d(u, v) + d(v, w) \geq d(u, w)$
2. $d(u, v) - d(v, w) \geq d(u, w)$
3. $d(u, v) + d(v, w) \leq d(u, w)$
4. $d(u, v) - d(v, w) \leq d(u, w)$

Options :

89951471170. 1
89951471171. 2

89951471172. 3

89951471173. 4

Question Number : 95 Question Id : 89951418199 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A metric space is a pair (S, d) , where S is a set and d is a _____ function

1. Vertex
2. Edges
3. Distance
4. None of the above

Options :

89951471174. 1

89951471175. 2

89951471176. 3

89951471177. 4

Question Number : 96 Question Id : 89951418200 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Set covering problem belongs to which of the class?

1. P
2. NP-Hard
3. Linear
4. None of the above

Options :

89951471178. 1

89951471179. 2

89951471180. 3

89951471181. 4

Question Number : 97 Question Id : 89951418201 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

To trim the list by parameter δ means _____ as many elements from L as possible

1. Add
2. Append
3. Remove
4. None of the above

Options :

89951471182. 1
89951471183. 2
89951471184. 3
89951471185. 4

Question Number : 98 Question Id : 89951418202 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

δ in the subset-sum approximation algorithm is chosen to be _____

1. ϵ/n
2. n/ϵ
3. $1/n$
4. $1/\epsilon$

Options :

89951471186. 1
89951471187. 2
89951471188. 3
89951471189. 4

Question Number : 99 Question Id : 89951418203 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

If there are p processors, then potentially we can cut down the solution time by a factor of _____

1. $1/p$
2. $p/2$
3. $\log p$
4. p

Options :

89951471190. 1
89951471191. 2

89951471192. 3

89951471193. 4

**Question Number : 100 Question Id : 89951418204 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

CREW (Concurrent Read and Exclusive Write) PRAM is a variation that permits _____

1. Concurrent reads but not concurrent writes
2. Concurrent reads & concurrent writes
3. Concurrent writes but not concurrent reads
4. None of the above

Options :

89951471194. 1

89951471195. 2

89951471196. 3

89951471197. 4