

Question 6 20

Linear & Binary search time for the given set of strings

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What are the end products generated in the tree?

 Harvard

Choosing the best option

- ☐ APRIL FEB DEC MAY SEPT

Question 21

Answer

Choose the best option

Which of the following options is not true about the Binary Search Tree?

- ☐ The value of the left child should be less than the root node
- ☐ The value of the right child should be greater than the root node
- ☐ The left and the right sub trees should also be a binary search tree
- ☐ None of the above

Question 8 10

Report

Choose the best option

Which of the given options provides the increasing order of asymptotic complexity of functions $f1$, $f2$, $f3$ and $f4$?

$$f1(n) = 2^n$$

$$f2(n) = n^{1/2}$$

$$f3(n) = n \log n$$

$$f4(n) = n^2 (\log n)$$

☐ A. $f1, f2, f4, f3$

☐ B. $f2, f1, f4$

☐ C. $f3, f1, f4$

☐ D. $f3, f4, f1$

5



Question # 17

Revised

Choose the best option:

An algorithm that calls itself directly or indirectly is known as _____

- ☐ Sub algorithm
- ☒ Recursive algorithm
- ☐ Polish notation
- ☐ Traversal algorithm

Clear Response



Question # 17



Choose the best option

An algorithm that calls itself directly or indirectly is known as _____

- ☐ Sub algorithm
- ☐ Recursive algorithm
- ☐ Polish notation
- ☐ Traversal algorithm



Question # 14

Report

Choose the best option

In Hash Table, which collision handling technique results in Secondary Clustering?

- ☐ Mid-Square
- ☐ Quadratic Probing
- ☐ Linear Probing
- ☐ Folding

Question 8/12

Revised

Choose the best option

How many Stacks are required to implement Queue data structure?

- ☐ 0
- ☐ 1
- ☐ 2
- ☒ 3



Question 9 9/10

An ADT is defined to be a mathematical model of a user-defined type along with the collection of all operations on that model.

 Hoguard

Choose the best option

- ☐ Cardinality
- ☐ Assignment
- ☐ Primitive
- ☐ Structure

Question # 8

Marked

In singly linked list, if head points to the first node, which of the following code will print data in the last node?

Choose the best option

- ☐ temp=head; while(temp!=null) { temp=temp.next; System.out.println(temp.data); }
- ☐ temp=head; while(temp.next!=null) { temp=temp.next; System.out.println(temp.data); }
- ☐ temp=head; while(temp.next!=null) { temp=temp.next; System.out.println(temp.data); }
- ☐ temp=head; while(temp!=null) { temp=temp.next; System.out.println(temp.data); }

Questions 6-7

Which of the following uses queue as data structure to store data?

 Report

Choose the best option

- ☐ Waiting queue for railway reservation system
- ☐ To check whether given string is palindrome
- ☐ Display string in reverse order
- ☐ DFS traversal of the tree

Question # 3

What does the following return?

Public and private finance 11

100 % original material

and $\mu_{\text{max}} = 0.4$

由 T₁

[L.C. = left child and R.C. = right child]

則 $(\Gamma \vdash C) \Rightarrow \text{ML}(\mathcal{A}, \perp)$ 且 $(\Gamma \text{ 封閉}) \Rightarrow \text{ML}(\mathcal{A}, \perp)$

$$v_{\text{max}} = 1$$

plus

```
value = value + getval(TLC) * getval(TRC)
```

1

1994.12.15

1

 Revised

Choose the best option

- ☐ Number of internal nodes in the tree
- ☐ Height of the tree
- ☐ Number of nodes without right sibling in the tree
- ☐ Number of leaf nodes in the tree

Question 4 of 5

Which of the following data elements is NOT used to implement "User Rights"?

☒ Name

☐ Password

☐ Email

☐ Phone

☐ Address

☐ Age

Question # 38

Revisit

Which of the following is recursive preorder traversal function if class node is defined as follows?

```
class Node {  
    int data;  
    Node* left, right;  
public: Node(int key) {  
    data = key;  
    left = right = null;  
}
```


Choose the best option

- ☐ void preorder(Node node) {
 if (node == null)
 return;
 System.out.println(node.data + " ");
 preorder(node.left);
 preorder(node.right);
}
- ☐ void preorder(Node node) {
 if (node != null)
 return;
 System.out.println(node.data + " ");
 preorder(node.left);
 preorder(node.right);
}
- ☐ void preorder(Node node) {
 if (node != null)
 return;
 preorder(node.left);
 preorder(node.right);
 System.out.println(node.data + " ");
}
- ☐ void preorder(Node node) {
 if (node == null)
 return;
 preorder(node.left);
 preorder(node.right);
 System.out.println(node.data + " ");
}



Need Question
Answer





Section 1 of 2

PG-DAC_0011_220127

Total 21.51 D6
Questions 10/51/100

28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Correct

Question # 37

Which algorithm strategy builds up a solution by choosing the option that looks the best at every step?

Choose the best option

☐ Greedy method

☐ Branch and bound

☐ Dynamic programming

☒ Divide and conquer return count

☐ Clear Non-existence

Question # 38

Which of the following is not a valid array declaration?

- Correct
- Choose the correct option
- ☐ System.out;
 - ☐ {collection obj};
 - ☐ Array arr;
 - ☐ Array arr[];

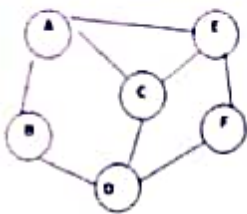


Question 8/36

Result

Choose the best option

Which is the correct representation of the given graph using adjacency matrix?



- ☐

	A	B	C	D	E	F
A	0	1	1	0	1	0
B	1	1	0	1	0	0
C	1	0	1	1	1	0
D	0	1	1	0	0	1
E	1	0	1	0	0	1
F	0	0	0	1	1	0
- ☐

	A	B	C	D	E	F
A	0	1	1	0	1	0
B	1	0	0	1	0	0
C	1	0	0	1	1	0
D	1	1	1	0	0	1
E	1	0	1	0	1	1
F	0	0	0	0	1	0
- ☐

	A	B	C	D	E	F
A	0	1	1	0	1	0
B	1	0	0	1	0	0
C	1	0	0	1	1	0
D	0	1	1	0	0	1
E	1	0	1	0	0	1
F	0	0	0	1	1	0

- ☐ Given graph cannot be represented as adjacency matrix because it is not weighted graph

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It already sorted array is passed to a sorting algorithm which you will be the process?

 Springer

Choose the best option

- ☐ Investment Dept
 - ☒ Information Dept
 - ☐ IT Dept
 - ☐ Library Dept
- ☐ Other Department

Question 8/35

Answered

Choose the best option

What is the best case time complexity of Bubble sort to sort an array of n elements?

- ☐ $O(n^2)$
- ☐ $O(n \log n)$
- ☐ $O(n)$
- ☒ $O(1)$

Clear Response

Question # 31

What is inorder traversal of the following tree?



Answer

Choose the best option

- ☐ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
- ☐ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
- ☐ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
- ☐ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Question 9/30

Marked

is a collision resolution scheme that searches the hash table for an unoccupied location beginning with the original location that the hash function specifies and continuing at increments of 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Choose the best option

- ☐ Linear probing
- ☒ Double hashing
- ☐ Quadratic probing
- ☐ Separate chaining

Clear Response

Question 8/28



Reset

Choose the best option

Which of the following algorithm can be used to efficiently sort a linked list?

- ☐ Merge Sort
- ☐ Quick Sort
- ☒ Heap Sort
- ☐ Selection Sort
- [Clear Response](#)

Question 6 20

Which of the following data structure is BEST suited to implement Priority Queue?

 Holt

Choose the best option

- **Priority Queue**
- **Deque**
- **Stack**
- **Queue**
- **Binary Tree**
- **Binary Search Tree**
- **Heap**
- **Queue using Linked List**
- **Art 89**

CSNC

Session 1 of 2

Pop Quiz: pop, push()

Progress: 0%

Time: 00:00:00

Score: 0/10

Question 1 of 1

Choose the best option.

Consider the stack shown below

10

20

30

40

50

60

70

80

90

100

↓

After performing the following operations in sequence, which value will be at the top of the stack?

pop, pop, pop, push(20), push(30), pop, pop, pop

20

30

40

50

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Next Question

Question # 26

Revisit

What is the worst case time complexity of Search() operation in an unbalanced Binary Search Tree having 'n' nodes?

Choose the best option

- ☐ $O(1)$
- ☒ $O(\log n)$
- ☐ $O(n)$
- ☐ $O(n \log n)$
- [Clear Response](#)

Question # 20

Create a Binary search tree for the given set of strings :
MAR, MAY, NOV, AUG, APR, JAN, DEC, JULY, FEB, JUNE, OCT, SEPT

What are the leaf nodes generated in the tree?

Revisit

Choose the best option

- ☒ APR, FEB, DEC, JULY, SEPT
- ☐ FEB, JUNE, SEPT
- ☐ Can't create the tree
- ☐ None of the above

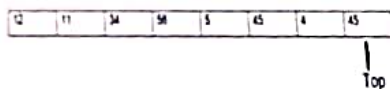
Clear Response

Question # 27

[Revisit](#)

Choose the best option

Consider the stack shown below



After performing the following operations in sequence, which value will be at the top of the stack?
pop pop pop push 29 push 30 pop pop pop

- ☒ 29
- ☐ 30
- ☐ 5
- ☐ 56

[Clear Response](#)

Question # 21

Which of the following options is not true about the Binary Search Tree?

[Revisit](#)

Choose the best option

- ☐ The value of the left child should be less than the root node.
- ☒ The value of the right child should be greater than the root node.
- ☐ The left and the right sub trees should also be a binary search tree.
- ☐ None of the above.

[Clear Response](#)

Question # 32

What is the time complexity of the following code:

```
int a = 0, i = N;  
while (i > 0)  
{  
    a += i;  
    i /= 2;  
}
```

Revisit

Choose the best option

- ☐ $O(N)$
- ☐ $O(\sqrt{N})$
- ☐ $O(N/2)$
- ☒ $O(\log N)$
- [Clear Response](#)

Question # 34

Revisit

Choose the best option

If already sorted array is passed to a sorting algorithm, which one will be the slowest?

- ☐ Insertion Sort
- ☒ Selection Sort
- ☐ Heap Sort
- ☐ Merge Sort
- [Clear Response](#)

Question # 33

Revisit

Choose the best option

What is the best-case time complexity of Bubble sort to sort an array of 'n' elements?

- ☐ $O(n^2)$
- ☐ $O(n \log n)$
- ☐ $O(1)$
- ☒ $O(n)$

Clear Response

Question # 35

Revisit

Consider the following type declaration for a doubly linked list node.

```
class DListNode {  
    int data;  
    DListNode prev;  
    DListNode next;  
}
```

Which of the following statements (in correct order) will correctly insert a 'newNode' node, before the node referenced by current? Assume that current is neither first nor last node in the linked list.

Choose the best option

- ☐ newNode.next = current, current.prev = newNode, newNode.prev = current.prev, current.prev.next = newNode;
- ☐ current.prev = newNode, newNode.next = current, newNode.prev = current.prev, current.prev.next = newNode;
- ☒ newNode.prev = current.prev, newNode.next = current, current.prev.next = newNode, current.next.prev = newNode;
- ☐ newNode.prev = current.prev, newNode.next = current, current.prev.next = newNode, current.prev = newNode;

Clear Response

Question # 22

Revisit

In Computational thinking terms, breaking down a complex problem into smaller, more specific sub-problems is called as _____

Choose the best option

- ☐ Problem Identification
- ☐ Decomposition
- ☐ Pattern Recognition
- ☒ Algorithmic Thinking
- ☐ Clear Response

Question # 19

What is time complexity of the following code?

```
int sum=0;
for (int i = 0; i < n; i++) {
    sum=sum+10;
    for (int j = 0; j < n; j++) {
        sum=sum * j;
        break;
    }
}
```

[Revisit](#)

Choose the best option

- ☒ $O(n^2)$
- ☐ $O(n)$
- ☐ $O(1)$
- ☐ $O(\log n)$
- [Clear Response](#)

Question # 12

How many Stacks are required to implement Queue data structure?

[Revisit](#)

Choose the best option

- ☐ 5
☒ 1
☐ 2
☐ 3

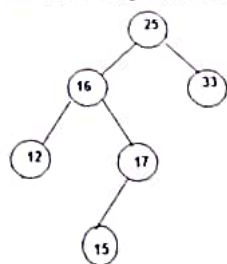
[Clear Response](#)

Question # 6

Revisit

Choose the best option

Which of the following statement is true for the given tree?



- ☐ Given tree is AVL tree
 - ☒ Given tree is not AVL tree.
 - ☐ Given tree is not AVL tree but it is binary search tree.
 - ☐ Given tree is Ordered Binary Search Tree.
- Clear Response

Question # 15

Revisit

Choose the best option

You are very hungry and you decide to bake a batch by following your grandmother's chocolate chip cookie recipe. Which of the following computational thinking skills required to complete the abovetask?

- ☐ Abstraction
- ☐ Algorithm Design
- ☐ Pattern Recognition
- ☒ Decomposition
- [Clear Response](#)

Question # 15

Revisit

Choose the best option

You are very hungry and you decide to bake a batch by following your grandmother's chocolate chip cookie recipe. Which of the following computational thinking skills required to complete the abovetask?

- ☐ Abstraction
- ☐ Algorithm Design
- ☐ Pattern Recognition
- ☒ Decomposition
- [Clear Response](#)

Question # 4

🔄 Revisit

Choose the best option

How many numbers of comparisons will be done in worst case using Binary Search if the number of elements in the array are 32?

☐ 10

☒ 2

☐ 5

☐ 4

Clear Response

Question # 20

Create a Binary search tree for the given set of strings :
MAR, MAY, NOV, AUG, APR, JAN, DEC, JULY, FEB, JUNE, OCT, SEPT

What are the leaf nodes generated in the tree?

Revisit

Choose the best option

- ☐ APR, FEB, DEC, JULY, SEPT
- ☐ FEB, JUNE, SEPT
- ☒ Can't create the tree
- ☐ None of the above

Clear Response

Question # 21

Which of the following options is not true about the Binary Search Tree?

 Revisit

Choose the best option

- ☐ The value of the left child should be less than the root node.
- ☒ The value of the right child should be greater than the root node.
- ☐ The left and the right sub trees should also be a binary search tree.
- ☐ None of the above

Clear Response

Question # 17

An algorithm that calls itself directly or indirectly is known as _____.

Revisit

Choose the best option

- ☐ Sub algorithm
- ☒ Recursive algorithm
- ☐ Polish notation
- ☐ Traversal algorithm
- [Clear Response](#)

 Revisit

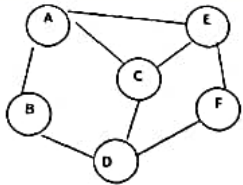
Choose the best option

- Clear Response

Question # 36

Revisit

Which is the correct representation of the given graph using adjacency matrix?



Choose the best option

- ☐

	A	B	C	D	E	F
A	0	1	1	0	1	0
B	1	1	0	1	0	0
C	1	0	1	1	1	0
D	0	1	1	0	0	1
E	1	0	1	0	0	1
F	0	0	0	1	1	0
- ☐

	A	B	C	D	E	F
A	0	1	1	0	1	0
B	1	0	0	1	0	0
C	1	0	0	1	1	0
D	1	1	1	0	0	1
E	1	0	1	0	1	1
F	0	0	0	0	1	0
- ☐

	A	B	C	D	E	F
A	0	1	1	0	1	0
B	1	0	0	1	0	0
C	1	0	0	1	1	0
D	0	1	1	0	0	1
E	1	0	1	0	0	1
F	0	0	0	1	1	0

☒ Given graph cannot be represented as adjacency matrix because it is not weighted graph

Clear Response

Question # 8

Revisit

In singly linked list if headpoints to the first node, which of the following code will print data in the last node?

Choose the best option

- ☐ temp=head;
while(temp!=null) {
temp=temp.next;
}
System.out.println(temp.data);
- ☐ temp=head;
while(temp.next!=null) {
temp=temp.next;
}
System.out.println(temp.data);
- ☒ temp=head;
while(temp.next==null) {
temp=temp.next;
}
System.out.println(temp.data);
- ☐ temp=head;
while(temp==null) {
temp=temp.next;
}
System.out.println(temp.data);

Clear Response

Question # 11

Revisit

Choose the best option

Which of the following algorithm can be used to detect negative cycle in a Graph?

- ☐ Prim
 - ☐ Kruskal
 - ☐ Dijkstra
 - ☒ Bellman Ford
- Clear Response

Question # 3

What does the following return?

```
Public int getval( Bnode T)
{ // T = root node
  int value = 0;
  if(T)
  { //LC = Left child and RC = right child
    if((T.LC)==NULL) && (T.RC) ==NULL)
      value = 1;
    else
      value = value + getval(T.LC) + getval(T.RC);
  }
  return value;
}
```

Revisit

Choose the best option

- ☐ Number of internal nodes in the tree
 - ☐ height of the tree
 - ☐ Number of nodes without right sibling in the tree
 - ☒ Number of leaf nodes in the tree
- Clear Response

Question # 18

 Review

Choose the best option

Which of the given options provides the increasing order of asymptotic complexity of functions f_1 , f_2 , f_3 and f_4 ?

○ 13, 12, 14, 11

○ 13, 12, 11, 14

- 12, 13, 11, 14

○ 12, 13, 14, 11

Clear Response

$$f(n) = 2^n$$
$$f_2(n) = n^2(3/2)$$
$$T_3(n) = n \log n$$
$$f_4(n) = n^k (\log n)$$

← CEE project

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~D2_Niraj_56579

➡ Forwarded

Q14 which of the following algorithm
can be used to

Ans: d) Bellman ford

2:11 PM

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what is the best case time complexity
of bubble sort to sort an array of n
elements

Ans. $O(n)$

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Sort array in Java: `Arrays.sort()`

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Hash table collision: quadratic probing

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Application of queue: Queue In railway
res system

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Q14 which of the following algorithm
can be used to

Ans: d) Bellman ford

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Q4 how many stack

Ans: b) 2



Pankaj Khot

22.03.22 at 2:19 PM

Message



2:21

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~Rahul Mishra

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q1. which of the following data structure is best suited to implement Priority Queue.

ans- Heap

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Q3 Inorder travel of _ yields to: binary search tree

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Q11-Which algorithm strategy builds up A-greedy algorithm

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q2. in order to travel of will yield a sorted listing of elements

ans- Binary search tree

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~Rahul Mishra

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Q7) Which of the following is not true about a binary search tree? Ans) none of the above

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q15. _ is a collision resolution
c. quadratic

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Q5 which is best time complexity for bubble sort....

Ans- $O(n^2)$



Message





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listing of elements

ans- Binary search tree

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Q7) Which of the following is not true about a binary search tree? Ans) none of the above

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q15. __ is a collision resolution
c. quadratic

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Q5 which is best time complexity for bubble sort....

Ans- $O(n)$

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Q10) Using _____ in java one can sort the arrays ans:- c) Arrays.sort()

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Forwarded

Q20- Which of the given options provides the increasing order of asymptotic complexity of

functions f_1, f_2, f_3 and f_4

$$f_1(n) = 2^n$$

$$f_2(n) = n^{3/2}$$

$$f_3(n) = n \log n$$

$$f_4(n) = n^{(\log n)}$$

Ans- a: f_3, f_2, f_4, f_1

2:10 PM



Message



SN	QUESTION	Option	Answer
1	Best case T.C. of bubble sort	A B C D	$O(n)$
2	Algorithm that calls itself	A B C D	Recursive
3	BEST data structure for priority queue	A B C D	Heap
4	The inorder traversal of... sorted linked	A B C D	Binary Search Tree
5	in collision resolution... $2^2, 2^3, 2^4$ on	A B C D	quadratic probing
6	You are very hungry... computational thinking	A B C D	Algorithm design
7		A B C D	
8		A B C D	
9	inorder traversal of following tree	A B C D	1-2-3-6-7-9-14-11-15
10	which algo. strategy.... best at every step	A B C D	greedy
11		A B C D	
12	How many comparisons worst case Binary	A B C D	5
13		A B C D	
14	MST Kruskals algo	A B C D	a-b,
15	Time complexity of Heap sort	A B C D	$O(n \log n)$
16		A B C D	
17		A B C D	
18		A B C D	
19		A B C D	
20		A B C D	
21		A B C D	
22		A B C D	
23		A B C D	
24		A B C D	
25		A B C D	
26	Computational thinking breaking down...	A B C D	decomposition
27		A B C D	
28		A B C D	
29	Worstcase T.C. of Search() in unbalanced BST	A B C D	$O(n)$
30		A B C D	
31		A B C D	
32		A B C D	
33		A B C D	
34		A B C D	
35		A B C D	
36		A B C D	
37		A B C D	
38		A B C D	
39		A B C D	
40		A B C D	

SN	QUESTION	Option	Answer
1	Best case T.C. of bubble sort	A B C D	$O(n)$
2	Algorithm that calls itself	A B C D	recursive
3	BEST data structure for priority queue	A B C D	Heap
4	The inorder traversal of... sorted linked	A B C D	Binary Search Tree
5		A B C D	
6	collision resolution... $1^2, 2^2, 3^2$ etc on	A B C D	quadratic probing
7	You are very hungry... computational thinking	A B C D	Algorithm design
8		A B C D	
9	inorder traversal of following tree	A B C D	1-2-3-5-7-9-11-15
10	which algo. strategy.... best at every step	A B C D	Greedy
11		A B C D	
12	How many comparisons worst case Binary	A B C D	5
13		A B C D	
14	msf Kruskals algo \rightarrow df, ab, bc, de	A B C D	msf Kruskals algo
15	Time complexity of Heap sort	A B C D	$O(n \log n)$
16	what is time comp. of following code	A B C D	$O(n)$
17		A B C D	
18		A B C D	
19		A B C D	
20		A B C D	
21	ADT is defined mathematical model	A B C D	primitive.
22	Algo to efficiently sort linked list	A B C D	merge sort
23		A B C D	
24		A B C D	
25		A B C D	
26	Computational thinking breaking down...	A B C D	decomposition
27		A B C D	
28	How many stacks req to implement queue	A B C D	two
29	worst case T.C. of search in unbalanced BST	A B C D	$O(n)$
30	In hash table collision secondary clustering	A B C D	quadratic probing
31	what is max. height of AVL Tree with 7 nodes	A B C D	3
32		A B C D	
33		A B C D	
34		A B C D	
35		A B C D	
36		A B C D	
37	which of the following data structure has ^{has} has ^{has}	A B C D	doubly linked list
38	Time complexity of merge sort	A B C D	$O(n \log n)$
39		A B C D	
40		A B C D	

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listing of elements

ans- Binary search tree

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Q7) Which of the following is not true about a binary search tree? Ans) none of the above

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q15. __ is a collision resolution
c. quadratic

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Q5 which is best time complexity for bubble sort....

Ans- $O(n)$

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Q10) Using _____ in java one can sort the arrays ans:- c) Arrays.sort()

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Q20- Which of the given options provides the increasing order of asymptotic complexity of

functions f1, f2, f3 and f4

$$f1(n) = 2^n$$

$$f2(n) = n^{3/2}$$

$$f3(n) = n \log n$$

$$f4(n) = n^{\log n}$$

Ans- a: f3, f2, f4, f1

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Q37)How many Stacks are required to
implement Queue data

Ans=two(2)

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Q19- Which of the following data structure is
BEST suited to implement LRU Cache?

Ans- c .doubly LL

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Q29 - not found

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31- an algorithm that calls itself

A- recursion

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32- in computational thinking terms

A- Decomposition

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Q8)Which of the following is not a example
of balanced binary search tree Ans)

a->Threaded binary tree

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35—

Ans —C number of leaf nodes in the tree

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Q38)What is the

Ans= b)3

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Sort array in Java: Arrays.sort()

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Hash table collision: quadratic probing

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Application of queue: Queue In railway
res system

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Q14 which of the following algorithm
can be used to
Ans: d) Bellman ford

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Q4 how many stacks are
Ans: b) 2

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what is the best case time complexity
of bubble sort to sort an array of n
elements
Ans. $O(n)$

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Q 2
Psudo code
Ans----> A

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13) not found

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Q 6 consider the following stack shown..

Ans - 56

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Q 17- Which of the following queue as data structures

==> a) Waiting queue for railway reservation system

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Q12 if already sorted array is passed...

Ans selection sort

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Q- MST FIGURE

ANS-a-b b-f d-f d-c d-e

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Q 30- number of comparison in 32 elements..... Ans:5

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Q37)How many Stacks are required to implement Queue data

Ans=two(2)

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Question # 14

In Hash Table, which collision handling technique results in Secondary Clustering?

Revisit

Choose the best option

- ☐ Mid-Square
- ☐ Quadratic Probing
- ☒ Linear Probing
- ☐ Folding
- Clear Response

Question # 16

Revisit

Choose the best option

What is the maximum height of any AVL tree with 7 nodes? Assume that the height of a tree with single node is 0.

- ☐ 2
- ☐ 3
- ☒ 4
- ☐ 5

Clear Response

Question # 10

Revisit

An ADT is defined to be a mathematical model of a user-defined type along with the collection of all operations on that model.

Choose the best option

- ☐ Cardinality
- ☒ Assignment
- ☐ Primitive
- ☐ Structure
- [Clear Response](#)

Question # 9

Revisit

Which node pointer should be updated if a new node B is to be inserted in the middle of A and C nodes of a doubly linked list?

Choose the best option

- ☐ Next Pointer of A, Previous Pointer of B, Next Pointer of C, and previous pointer of C
- ☐ Next Pointer of A, Previous Pointer of B, Next Pointer of B and previous pointer of C
- ☒ Next Pointer of A, Previous pointer of A, next pointer of B and previous pointer of C
- ☐ None of the above

Clear Response

Question # 2

Which of the following data structure is BEST suited to implement LRU Cache?

Revisit

Choose the best option

- ☐ Array
- ☐ Binary Tree
- ☐ Doubly Linked List
- ☒ Graph

Clear Response

Question # 5

Revisit

Choose the best option

Which of the following is NOT an example of balanced Binary Search Tree?

- ☐ Threaded Binary Tree
- ☒ AVL Tree
- ☐ Red-black Tree
- ☐ Splay Tree
- [Clear Response](#)

Question # 40

Revisit

Choose the best option

Complete the following code if the function implements bubble sort, to sort elements in ascending order.

```
public static void bubbleSort(int arr[]){  
    int n=arr.length;  
    for(int i=0;i<n;i++)  
    {  
        for(int j=1;j<(n-i);j++) {  
            if(arr[j-1]>arr[j]) {  
                _____//code goes here  
            }  
        }  
    }  
}
```

- ☐ int temp=arr[j];
arr[j+1]=arr[j];
arr[j]=temp;
- ☒ int temp=arr[j]-1;
arr[j-1]=arr[j];
arr[j]=temp;
- ☐ int temp=arr[i-1];
arr[i-1]=arr[j];
arr[i]=temp;
- ☐ int temp=arr[i-1];
arr[i-1]=arr[j];
arr[j]=temp;

Clear Response

Question # 13

Revisit

Choose the best option

The Inorder traversal of _____ will yield a sorted listing of elements.

- ☒ Binary trees
- ☐ Binary search trees
- ☐ Heaps
- ☐ AVL Trees
- Clear Response

Question # 1

Which data structure is required to convert the infix to prefix notation?

Revisit

Choose the best option

- ☒ Stack
- ☐ Linked List
- ☐ Binary Tree
- ☐ Queue
- [Clear Response](#)

Question # 29

Revisit

Choose the best option

Which of the following data structure is BEST suited to implement Priority Queue?

- ☒ Doubly Linked List
 - ☐ Heap
 - ☐ Queue using Linked List
 - ☐ Array
- Clear Response

Question # 28

Which of the following algorithm can be used to efficiently sort a linked list?

 Revisit

Choose the best option

- ☐ Merge Sort
- ☒ Quick Sort
- ☐ Heap Sort
- ☐ Selection Sort
- [Clear Response](#)

Question # 23

Revisit

If the list is a circular linked list, with first points to the first node and temp points to the last node. Which of the following code snippet will delete a node, which is after temp?

```
class Node{  
    int data;  
    Node next;  
}
```

Choose the best option

- ☐ mynode=first
mynode.next=temp.next;
mynode.next=first;
- ☒ mynode=first
temp.next=mynode;
mynode.next=first;
- ☐ temp.next=first.next;
☐ mynode=first;
first=first.next;
mynode.next=null
- ☐ None of the above
- Clear Response

Question # 38

Revisit

Choose the best option

Using _____ in java, one can sort the arrays.

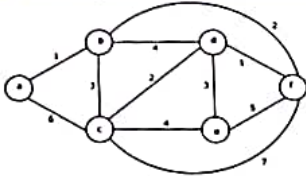
- ☐ System sort()
 - ☐ Collection sort()
 - ☒ Arrays sort()
 - ☐ Array sort()
- Clear Response

Question # 25

Revisit

Choose the best option

Find the MST for Figure 1 and List order in which the edges are added in MST using kruskal's algorithm .



- ☐ a-b , d-f, b-f, c-d d-e
- ☐ a-b, b-f, d-f, d-c, d-e
- ☒ d-f, d-c, f-b, a-b, d-e
- ☐ None of the above

Clear Response

Question # 37

Revisit

Choose the best option

Which algorithm strategy builds up a solution by choosing the option that looks the best at every step?

- ☒ Greedy method
 - ☐ Branch and bound
 - ☐ Dynamic programming
 - ☐ Divide and conquer return count
- Clear Response

 Revisit

Choose the best option

☐ Linear probing

☒ Double hashing

☐ Quadratic probing

☐ Separate chaining

Clear Response

Question # 31

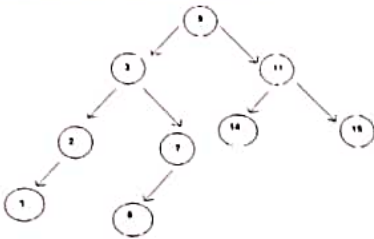
What is inorder traversal of the following tree?

Revisit

Choose the best option

- ☐ 1 2 3 5 7 14 9 15 11
- ☒ 1 2 3 5 7 9 14 11 15
- ☐ 1 2 3 5 9 7 14 11 15
- ☐ 1 2 3 5 7 9 11 14 15

Clear Response



Question # 39

Revisit

Which of the following is recursive preorder traversal function, if class node is defined as follows?

```
class Node {  
    int data;  
    Node left, right;  
    public Node(int key) {  
        data = key;  
        left = right = null;  
    }  
}
```

Choose the best option

- ☐ void preorder(Node node) {
 if (node == null)
 return;
 System.out.print(node.data + "——>");
 preorder(node.left);
 preorder(node.right);
}
- ☐ void preorder(Node node) {
 if (node != null)
 return;
 System.out.print(node.data + "——>");
 preorder(node.left);
 preorder(node.right);
}
- ☒ void preorder(Node node) {
 if (node != null)
 return;
 preorder(node.left);
 preorder(node.right);
 System.out.print(node.data + "——>");
}
- ☐ void preorder(Node node) {
 if (node == null)
 return;
 preorder(node.left);
 preorder(node.right);
 System.out.print(node.data + "——>");
}

Question # 24

The time complexity of merge sort algorithm is _____.

Revisit

Choose the best option

- ☐ $O(n)$
- ☐ $O(\log n)$
- ☐ $O(n^2)$
- ☒ $O(n \log n)$

Clear Response

Question 8/26

Reveal

Choose the best option

What is the worst case time complexity of Search operation in an unbalanced Binary Search Tree having n nodes?

- ☐ $O(1)$
- ☐ $O(\log n)$
- ☐ $O(n)$
- ☐ $O(n \log n)$



Question # 27

Reveal

Choose the best option

Consider the stack shown below



After performing the following operations in sequence, which value will be at the top of the stack?

pop pop pop push 20 push 30 pop pop pop

☐ 20☐ 30☐ 0☒ 50

Clear Response

Question # 32

Revised

Choose the best option

What is the time complexity of the following code

```
for a = 0; i = N;
while (i > 0)
{
    a += i;
    i = 2;
}
```

- ☐ $O(N)$
- ☐ $O(\log(N))$
- ☐ $O(N^2)$
- ☐ $O(\log N)$





Question 0 01

Answered

Choose the best option

Consider the following type description for a doubly linked list node

node {
 TS offset;
 TS data;
 TS offset_prev;
 TS offset_next;
}

Which of the following statements (in correct order) will correctly insert a new node before the node referenced by current? Assume that current is neither first nor last node in the linked list.

- node.offset_next = current; current_prev = node; node.offset_prev = current_prev; current_prev.next = node;
- current_prev = node; node.offset_next = current; node.offset_prev = current_prev; current_prev.next = node;
- node.offset_prev = current_prev; node.offset_next = current; current_prev.next = node; current_prev.next = node;
- node.offset_prev = current_prev; node.offset_next = current; current_prev.next = node; current_prev = node;



Question # 25

Revisit

Consider the following type declaration for a doubly linked list node

```
class DListNode {  
    int data;  
    DListNode prev;  
    DListNode next;  
}
```

Which of the following statements (in correct order) will correctly insert a 'newNode' node before the node referenced by 'current'? Assume that 'current' is neither first nor last node in the linked list

Choose the best option

- ☐ newNode.next = current; current.prev = newNode; newNode.prev = current.prev; current.prev.next = newNode;
- ☐ current.prev = newNode; newNode.next = current; newNode.prev = current.prev; current.prev.next = newNode;
- ☒ newNode.prev = current.prev; newNode.next = current; current.prev.next = newNode; current.next.prev = newNode;
- ☐ newNode.prev = current.prev; newNode.next = current; current.prev.next = newNode; current.prev = newNode;



Question # 40

Revisit

Choose the best option

Complete the following code if the function implements bubble sort, to sort elements in ascending order

```
public static void bubbleSort(int arr[]) {
```

```
    int n=arr.length;
```

```
    for(int i=0;i<n;i++)
```

```
    {
```

```
        for(int j=1;j<(n-i);j++) {
```

```
            if(arr[j-1]>arr[j]) {
```

```
                _____//code goes here
```

```
            }
```

```
        }
```

```
    }
```

```
}
```

☐ int temp=arr[j];

arr[j+1]=arr[j];

arr[j]=temp;

☐ int temp=arr[j-1];

arr[j-1]=arr[j];

arr[j]=temp;

☒ int temp=arr[j-1];

arr[j-1]=arr[j];

arr[j]=temp;

☐ int temp=arr[j-1];

arr[j-1]=arr[j];

arr[j]=temp;

Clear Response

Question # 40

Revisit

Choose the best option

Complete the following code if the function implements bubble sort, to sort elements in ascending order

```
public static void bubbleSort(int arr[]){
    int n=arr.length;
    for(int i=0;i<n;i++)
    {
        for(int j=1;j<=(n-i);j++) {
            if(arr[j-1]>arr[j]) {
                _____//code goes here
            }
        }
    }
}
```

- ☐ int temp=arr[j];
arr[j+1]=arr[j];
arr[j]=temp;
- ☒ int temp=arr[j-1];
arr[j-1]=arr[j];
arr[j]=temp;
- ☐ int temp=arr[i-1];
arr[i-1]=arr[i];
arr[i]=temp;
- ☐ int temp=arr[i-1];
arr[i-1]=arr[i];
arr[i]=temp;

Clear Response

Question # 4

How many numbers of comparisons will be done in worst case using Binary Search if the number of elements in the array are 32^3

Choose the best answer.

- ☐ 10
☐ 2
☐ 5
☐ 4



Question 2

 Flat studio

Chose the best option

Which of the following data structure is BEST suited to implement LRU Cache?

- ☐ Array
- ☐ Binary Tree
- ☐ Doubly Linked List
- ☒ Graph

Question 2/3

Which of the following is NOT an example of balanced Binary Search Tree?

Choose the best option

- ☐ Threaded Binary Tree
- ☐ AVL Tree
- ☐ Red-Black Tree
- ☐ Splay Tree



Question 8

Why is case position should be updated if a new node B is to be inserted in the middle of A and C nodes of a doubly linked list ?

Choosing the best option

- ☐ Next Point of A, Previous Point of B, Next Point of C, and previous point of C.
☐ Next Point of A, Previous Point of B, Next Point of B and previous point of C.
☐ Next Point of A, Previous point of A, Next point of B and previous point of C.
☒ None of the above.

Question # 11

Answered

Choose the best option

Which of the following algorithm can be used to detect negative cycle in a Graph?

- ☐ Prim
- ☐ Kruskal
- ☐ Dijkstra
- ☐ Bellman Ford

Question # 11

Revised

Choose the best option

The inorder traversal of _____ will yield a sorted listing of elements

- ☐ Binary trees
- ☐ Binary search trees
- ☐ Heaps
- ☐ AVL Trees



1. **Introduction**



Signature

Choose the best option

You are very hungry and you decide to bake a batch by following your grandfather's chocolate chip cookie recipe. Which of the following computational thinking skills required to complete the worksheet?

- ☐ Abstraction
- ☒ Algorithm Design
- ☐ Pattern Recognition
- ☐ Decomposition

Case Response

2

Question # 10

What is the complexity of the following code?

```
int sum=0;
for (int i = 0; i < n; i++) {
    sum=sum+i;
}
for (int j = 0; j < n; j++) {
    sum=sum+j;
}
break;
```

Answer

Choose the best option

- ☒ O(n²)
- ☐ O(n)
- ☐ O(1)
- ☐ O(log n)
- ☐ None of these

Clear Response

Question # 99

What is time complexity of the following code?

```
int sum=0;
for (int i = 0; i < n; i++) {
    sum+=i;
    for (int j = 0; j < i; j++) {
        sum+=sum;
    }
}
```

Hard

Choose the best option

- ☐ $O(n^2)$
- ☐ $O(n)$
- ☐ $O(1)$
- ☐ $O(\log n)$

