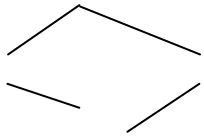
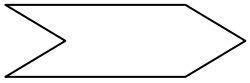
1.	Bill has an algorithm, find2D, to find an element x in an nXn array A. The algorithm find2D iterates over the rows of A & calls the algorithm arrayFind on each row, until x is found or it has reached all rows of A. What is the worst case running time of find2D in terms of n? A) n B) log(n) C) n(log(n)) D) n^2
2.	Algorithm Loop1(n): Algorithm Loop2(n): S ← 0 P ← 1 For I ← 1 to n do For I ← 1 to 2n do S ← S+I P ← P.I The running time for the above algorithms in Big Oh notation will be respectively A) O(n) and O(n^2) B) O(nlog(n)) and O(log(n)) C) O(n) and O(n) D) O(log(n)) and O(n)
3.	Where an item with the largest key will be stored in a heap A) at the root B) at any internal node C) at any external node D) at any parent node
4.	The height of the any of the children of a node should at most differ by one is the property of A) AVL tree B) splay tree C) Binary search tree D) Heap E) Red-Black Tree
5.	Sorted priority queues are used in A) Bubble sort B) quick sort C) Insertion Sort D) Selection Sort E) Radix Sort
6.	Generally for finding the complexity of an algorithm we find the time for A) best case B) average case C) Worst case D) Mean case E) Median case
7.	Stack does not have the one of the following methods A) Pop B) push C) Top D) Size E) replace
8.	Queue has one of the following methods A) insert before B) swap C) Enqueue D) Pop E)root
9.	Sequence has the properties of the data structures combined A) stack & queue B) List & Vector C) List & Stack D) Tree & Graph E) tree & queue
10.	Internal Node is best described by A) a root node B) A node with at least two child C) A node with at least one child D) a node with no child E) a leaf node
11.	In Preorder traversal A) First root is visited B) First left child is visited C) first right child is visited D) First leaf nodes are visited E) first external nodes are visited
12.	One of the Following is not a type of tree A) AVL trees B) Red Black Trees C) 2-3-4 Trees D) Blue Black trees E) Binary search trees

13.	The total cost of accessing the given binary search tree will be  A) 15 B) 8 C) 5 D) 11
14.	One of the following is a specific implementation of Multi Way search Tree A) 2-3-4 Tree B) Binary Search tree C) Binary Tree D) Complete Binary Tree E) AVL Tree
15.	The minimum time will be taken by the algorithm of complexity A) log n B) n C) n logn D) n^2 E) n^3
16.	In breadth First Search the no. of levels of the graph are  A) 1 B) 2 C) 3 D) 4
17.	Number of comparisons required by an optimal algorithm to find the maximum and the minimum from the given array is A) 4n B) 2n C) 3n D) n E) log n F) nlogn
18.	A complete binary tree with n leaves contains A) n nodes B) 2n-1 nodes C) 2n nodes D) log n nodes
19.	Five items 1,2,3,4,5 are pushed in a stack in order starting from 1. The stack is popped four times & popped elements are inserted in a queue then two elements are deleted from the queue & pushed back in the stack. Now one element is popped from the stack, the popped element is A) 1 B) 2 C) 3 D) 4 E) 5
20.	The followingis not a example of Divide & Conquer algorithm A) Binary Search B) Merge Sort C) Matrix Multiplication D) traveling Salesman E) Quick Sort
21.	Convert the following into a postfix expression (A-B)*(D/E) A) AB-DE/* B) A*BD/E- C) ABDE-/* D) /-ABDE E) AB/DE-*
22.	In T(n) = a * T(n/b) + f(n) , a refers to A) size of sub problem B) No. of sub problems C) Size of the problem D) Time to combine solution
23.	T(n) = 4 T (n/2) + n then in Big Oh Notation it is A) $O(n^2)$ B) O(4) C) O(n) D) O(log(n))
24.	In strassen's Multiplication Algorithm the T(n) is A) $7T(n) + bn^2$ B) $7T(n/2) + bn^2$ C) $8T(n/2) + bn^2$ D) $7T(n/2) + bn$

25.	In a fractional Knapsack three items(1,2,3) have weights (4,8,6) & profits (12,32,30) respectively. If the weight of the knapsack is 10 then the solution is A) 3→6 , 2→4 B) 3→4 , 2→6 C) 3→6 , 1→4 D) 1→4 , 2→6
26.	One of the following coin change problem does not form the greedy choice property in which we give the coin in ascending order to give the minimum no. of coins A) 32,8,1 B) 30,20,5,1 C) 50,12,3 D) 30,12,3
27.	Job sequencing with deadlines we have 4 jobs with profits(30,20,10,5) & deadlines as (1,2,1,2) then the best sequence to run on the machine is A) 1,2 B) 2,1 C) 1,3 D) 1,4 E) 3,2
28.	Kruskal algorithm is implementation of A) Optimal Merge Patterns B) Minimum Spanning Tree C) Optimal Binary Search Tree D) Matrix chain Product
29.	In the matrix chain product of (2x10)(10X4)(4X7) the solution is A) 136 B) 420 C) 360 D) 128
30.	In a multistage graph the minimum no. of stages are A) 0 B)3 C) 1 D)2
31.	The applications of graph are in A) Networking B) Internet C) Electronic circuits D) Transportation System E) All of the above
32.	The applications of stack are in A) When we browse the internet B) When we undo in the editor C) Function or procedure calls D) Recursion E) All of the above