

Choose the correct answer and update in Google form

QP No: NO1A48EJ

Q1. **Dijkstra's Algorithm :**

- A. Has greedy approach to find all shortest paths
- B. Has both greedy and dynamic approach
- C. has greedy approach to compute single source shortest paths to all other vertices
- D. none

Q2. **Which of the following represents the Postorder Traversal of a Binary Tree?**

- A. Left -> Right -> Root
- B. Left -> Root -> Right
- C. Right -> Left -> Root
- D. Right -> Root -> Left

Q3. **The total comparisons in finding both smallest and largest elements are**

- A.  $2*n+2$
- B.  $n + ((n+1)/2) - 2$
- C.  $n+\log n$
- D.  $n^2$

Q4. **which data structure is supporting insertion and deletion can be performed at both the ends?**

- A. Doubly linked list
- B. Stack
- C. Dequeue
- D. Queue

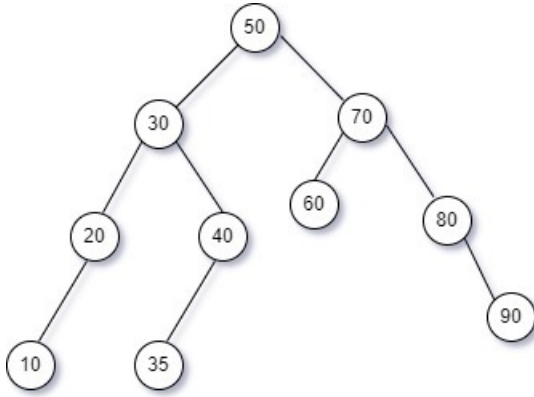
Q5. **Which of the following is not the type of queue?**

- A. Priority queue
- B. Single-ended queue
- C. Circular queue
- D. Ordinary queue

Q6. **Consider a BST (Binary search tree) of values 50,30,20,10,40,70,60,80 what is the functionality of the following code**  
**node \*funct(node\* root, int n1, int n2) { if (root == NULL) return NULL; if (root->data > n1 && root->data > n2)**  
**return funct(root->left, n1, n2); if (root->data < n1 && root->data < n2) return funct(root->right, n1, n2); return root;**  
**}**

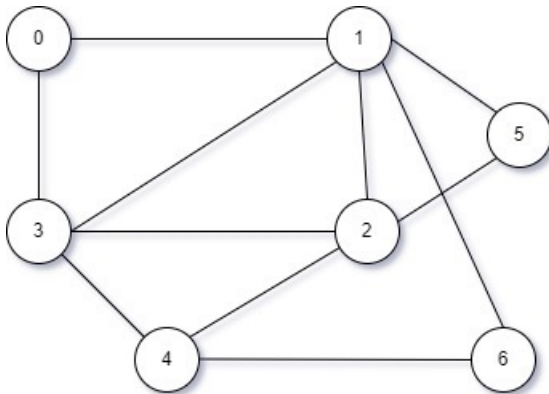
- A. Finds a lowest common ancestor of a given BST(Binary search tree)
- B. Finds a diameter of a BST(Binary search tree)
- C. Checks if two nodes are cousins or not
- D. Checks whether the given BST(Binary search tree) is balanced or not

Q7. Find the vertical order traversal for the given Binary Search tree (BST)



- A. -3 ->10, -2 -> 20, -1 -> 30 35, 0 -> 50 40 60, 1 -> 70, 2 -> 80, 3 -> 90
- B. -3 -> 10, -2 -> 20, -1 -> 30 35, 0 -> 40 60, 1 -> 70, 2 ->90, 3 -> 80
- C. -3 ->10, -2 -> 20, -1 -> 33 , 0 -> 40 60 50 , 1 -> 70, 2 -> 80, 3 -> 90
- D. None of the Above

Q8. Consider 0 (Zero) as root node, find the BFS of a given graph



- A. 0 1 5 6 4 2 3
- B. 0 1 3 2 5 6 4
- C. 0 3 2 6 5 4 1
- D. 0 3 2 4 5 6 1

Q9. Given the input 1,2,3,4,5, What is the functionality of the following code `struct Node{ int data; struct Node*next; }; struct Node*head; void funct(int data){ struct Node*newnode; newnode=(struct Node*)malloc(sizeof(struct Node)); newnode->data=data; newnode->next=head; head=newnode; }`

- A. Inserting a node at the begining of the list
- B. Deleting a node at the begining of the list
- C. Inserting a node at the end of the list
- D. Deleting a node at the end of the list

Q10. which of the following data struture is not suitable when implementing priority queue

- A. array
- B. linked list
- C. heap
- D. graph

Q11. The HAVING clause does which of the following?

- A. Acts EXACTLY like a WHERE clause.
- B. Acts like a WHERE clause but is used for columns rather than groups.
- C. Acts like a WHERE clause but is used for groups rather than rows.
- D. Acts like a WHERE clause but is used for rows rather than columns.

Q12. If we have not specified ASC or DESC after a SQL ORDER BY clause, the following is used by default

- A. DESC
- B. ASC
- C. There is no default value
- D. None

Q13. Which one of the following refers to the "data about data"?

- A. Directory
- B. Sub Data
- C. Warehouse
- D. Meta Data

Q14. Select the correct definition of relation.

- A. Subset of a cartesian product of list of domains
- B. Subset of a cartesian product of list of tuple
- C. Subset of a cartesian product of list of attributes
- D. Subset of a cartesian product of list of relations

Q15. In a database Table, the each category of information Is called \_\_\_\_\_

- A. Tuple
- B. Field
- C. Record
- D. All Of Above

Q16. Amongst which of the following is / are true about the authentication \_\_\_\_.

- A. It is a process of verifying the identity of a client
- B. It is a process of verifying network
- C. It is a process of verifying the database
- D. None of the mentioned

Q17. The given Query can be replaced with \_\_\_\_\_ **SELECT name FROM instructor1 WHERE salary <= 100000 AND salary >= 90000;**

- A. SELECT name FROM instructor1 WHERE salary BETWEEN 100000 AND 90000
- B. SELECT name FROM instructor| WHERE salary BETWEEN 90000 AND 100000;
- C. SELECT name FROM instructor1 WHERE salary BETWEEN 90000 AND 100000;
- D. SELECT name FROM instructor! WHERE salary <= 90000 AND salary>=100000;

Q18. In the data type TIME(p), what does p stands for?

- A. The amount of delay required to be added to the time
- B. The maximum number of allowed hours
- C. The number of fractional digits for the seconds
- D. None

Q19. Select the valid SQL type.

- A. NUMERIC
- B. CHARACTER
- C. FLOAT
- D. All of the above

**Q20. In SQL, Which of the following is not a DDL commands**

- A. RENAME
- B. REVOKE
- C. GRANT
- D. UPDATE