DATA STRUCTURE LAB

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1. Which of the following linked list below have last node of the list pointing to the first node?

- [ ] circular doubly linked list
- [x] circular linked list
- [ ] circular singly linked list
- [ ] doubly linked list

Clear selection

2. A _____ tree is a tree where for each parent node, there is only one associated child node

- ○ balanced binary tree
- ○ rooted complete binary tree
- ○ complete binary tree
- ◉ degenerate tree

Clear selection

3. Which of the following ways is a pre-order traversal?

- ◉ Root->left sub tree-> right sub tree
- ○ Root->right sub tree-> left sub tree
- ○ right sub tree-> left sub tree->Root
- ○ left sub tree-> right sub tree->Root

Clear selection

4. Which data structure is mainly used for implementing the recursive algorithm?

- ○ Queue
- ◉ Stack
- ○ Linked list
- ○ Binary tree

Clear selection

5. Which of the following principle is used if two elements in the priority queue have the same priority?

- ○ LIFO
- ◉ FIFO
- ○ Linear tree
- ○ None of the above

Clear selection

6. Which one of the following is the overflow condition if a circular queue is implemented using array having size MAX?

- ○ rear= MAX-1
- ○ rear=MAX
- ◉ front=(rear+1) mod max
- ○ None of the above

Clear selection

7. A list of elements in which enqueue operation takes place from one end, and dequeue operation takes place from one end is__

- ○ Binary tree
- ○ Stack
- ◉ Queue
- ○ Linked list

Clear selection

8. ADT is called as Abstract because

- ○ It is completely independent data type
- ○ It is collection of different data types
- ◉ Implementation Details are hidden
- ○ None of these

Clear selection

9. If elements of the data structure forms a sequence of list then it is called as _____.

- ◉ Linear data structure
- ○ Non-primitive data structure
- ○ Primitive data structure
- ○ None of these

Clear selection

10. What is the process of finding the location of a given data element in the data structure called?

- ○ Deletion
- ○ Insertion
- ◉ Searching
- ○ Traversing

Clear selection

11. What does the following function do for a given Linked List with first node as head? void fun1(struct node* head){ if(head == NULL) { return; } fun1(head->next); printf("%d ", head->data);}

- (●) Prints all nodes of the linked list in reverse order
- ( ) Prints all nodes of the linked list
- ( ) Prints alternate nodes of the linked list
- ( ) Prints alternate nodes of the linked list in reverse order

Clear selection

12. Which of the following c code is used to create new node?

- (●) ptr = (NODE*)malloc(sizeof(NODE))
- ( ) ptr = (NODE*)malloc(NODE);
- ( ) ptr = (NODE*)malloc(sizeof(NODE*));
- ( ) ptr = (NODE)malloc(sizeof(NODE));

Clear selection

13. The following postfix expression with single digit operands in evaluated using a stack 8 2 3 ^ / 2 3 8 + 5 1 * (. Note that ^ is the exponentiation operator. The top two elements of the stack after the first * is evaluated are

- ○ 5 , 7
- ○ 1 , 5
- ◉ 6 , 1
- ○ 3 , 2

Clear selection

14. Given an integer array arr[], the ith element can be accessed by writing

- ○ *(arr+i)
- ○ *(i+arr)
- ○ arr[i]
- ◉ All of the above

Clear selection

15. What is the most suitable data structure for parentheses checking?

- ◉ Stack
- ○ Queue
- ○ Array
- ○ Tree

Clear selection

16. If Selection Sort is applied on the given array A=[4, 6, 7, 5, 9, 3, 1 ,8, 2] then after first pass which will be the order?

- (●) 1, 6, 7, 5, 9, 2, 4, 8, 3
- ( ) 1, 2, 7, 6, 9, 3, 4, 8, 5
- ( ) 1, 2, 7, 5, 9, 4, 8, 3, 6
- ( ) 1, 2, 7, 5, 9, 3, 4, 8, 6

Clear selection

17. A graph in which all vertices have equal degree is known as ____

- (●) Regular Graph
- ( ) Multi Graph
- ( ) Complete Graph
- ( ) Simple Graph

Clear selection

18. To perform level-order traversal on a binary tree, which of the following data structure will be required?

- ( ) Hash Table
- (●) Queue
- ( ) Binary Search Tree
- ( ) Stack

Clear selection

19. A binary tree in which all its levels except the last, have maximum numbers of nodes, and all the nodes in the last level have only one child it will be its left child. Name the tree

- (●) Complete Binary Tree
- ( ) Threaded Tree
- ( ) M-way Search Tree
- ( ) Full Binary Tree

Clear selection

20. Which of the following is the infix expression?

- (●) A+B*C
- ( ) +A*BC
- ( ) ABC+*
- ( ) None of the above

Clear selection

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