

1. An ADT is defined to be a mathematical model of a user-defined type along with the collection of all _____ operation on that model
 - a) Cardinality
 - b) Assignment
 - c) Primitive
 - d) Structured
2. Which one of the following rule is correct in variable declaration?
 - a) Do not use single name
 - b) Do not use generic name
 - c) Abbreviation are not excluded as intelligent data names
 - d) All of the above
3. A variant of linked list in which last node of the list points to the first node of the list is ?
 - a) Singly linked list
 - b) Doubly Linked list
 - c) Circular linked list
 - d) Multiply linked list
4. Each node in a linked list has two pairs of _____ and _____
 - a) Link field and information field
 - b) Link field and avail field
 - c) Avail field and information field
 - d) Address field and link field
5. Process of inserting an element in stack is called _____
 - a) Create
 - b) push
 - c) Evaluation
 - d) Pop
6. Which of the following is not an inherent application of stack?
 - a) Reversing a string
 - b) Evaluation of postfix expression
 - c) Implementation of recursion
 - d) Job Scheduling
7. In a binary tree , which of the following traversals would print the number in their ascending order?
 - a) Level Order
 - b) Pre-Order
 - c) Post-Order
 - d) In-Order

8. The leaves of an expression tree always contain?

- a) Operators b) Operands c) Null d) expression

9. A graph with all vertices having equal degree is known as _____

- a) Multi graph b) Regular graph c) Simple graph d) Complete graph

10. A graph traversal is different from tree traversal, because _____

- a) Trees are not connected b) graph may have loops
c) tree have root d) None of these

PART-B (5 * 5 = 25 marks)

Answer ALL questions

Choosing either a) or b)

11 a) Discuss about Big-O Notation.

(Or)

b) Write a model for an Abstract Data Type.

12 a) Clarify linked list data structure.

(Or)

b) How to insert a value in Multilinked List.

13 a) Write about Postponement in stack.

(Or)

b) Demonstrate the Data Structure of Queue Linked List.

14 a) Discuss about Tree Representation.

(Or)

b) Define Binary Tree. Explain its Properties.

15 a) Determine the Sorting Process.

(Or)

b) Explain about Traverse Graph Operation.

PART-C(5 * 8 = 40 marks)

Answer ALL questions

Choosing either a) or b)

16 a) Explain about various hashing methods.

(Or)

b) Discuss the variations of sequential search

17 a) Clarify about Linked list Concepts.

(Or)

Explain how

b) *to* process the Linked list.

18 a) Explain about Queue operations

(Or)

b) Write detailed notes on Stack Algorithm.

19 a) Summarize *the* Binary Tree Traversal. *in detail*.

(Or)

b) Explain in detail about Binary Search Tree.

20 a) Write about Quick Sort with an example.

(Or)

b) Discuss about Minimum Spanning Tree with an example.