Reg. No. : | | | | | | | | | | | | |

Question Paper Code: 1063435

B.E. / B.Tech. DEGREE EXAMINATIONS, NOV/ DEC 2024
Third Semester
Electronics and Communication Engineering
U20CS306 - DATA STRUCTURES AND OOPS
(Regulation 2020)

Time: Three Hours Maximum: 100 Marks

Answer ALL questions

PART – A (10 x 2 = 20 Marks)

1. Show the characteristics of constructor?

2. What is function overloading?

3. Define Inheritance.

4. Summarize dynamic binding.

5. What is linear data structure? Give example.

6. List down the steps to modify a node in linked lists.

7. Define sibling?

8. List down the two methods of binary tree implementation?

9. What is meant by Sorting?

10. State which sorting algorithm is easily adaptable to singly linked lists? Why?

PART – B (5 x 16 = 80 Marks)

11. (a) Develop a program to implement Constructor, Copy constructor and Destructor? (16)

(OR)

(b) Construct detail program about Operator Overloading? (16)

12. (a) Explain a multilevel and Multiple inheritances. (16)

(OR)

(b) What is polymorphism explain its types with simple example? (16)

13. (a) Explain the insertion operation in linked list. How nodes are inserted after a specified node. (16)

(OR)

(b) Illustrate the linked list implementation of stack ADT in detail? (16)

14. (a) Construct an algorithm for expression tree apply in order, preorder and post order traversals. (16)

(OR)

(b) Apply Breadth First Search algorithm with suitable example? (16)

15. (a) Show an algorithm to implement insertion sort with suitable example. (16)
14,33,27,10,35,19,42,44

(OR)

(b) Explain with the example for linear search operation List :
65,20,10,55,32,12,50,99 Search element :12. (16)

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