HALF YEARLY EXAMINATION, 2020-2021

B.Sc. (Information Technology)- Third Year

Paper- II (Code-0929)

FUNDAMENTAL DATA STRUCTURE

Time: 03 Hours Max Marks: 50

Note: - Attempt any 2 questions from each section. Each question has equal marks.

Section –I

1. What is data structure? Explain analysis of algorithm.
2. Explain Infix, Prefix and Postfix notation with example.
3. Explain circular queue with suitable example?

Section –II

4. Explain doubly linked list with suitable example.
5. Describe the circular linked list of queue.
6. Write the applications of linked list.

Section –III

7. Describe the basic terminology of binary trees.
8. Explain the traversal of binary trees with examples.
9. Explain threaded binary tree with example.

Section –IV

10. Write an algorithm for PUSH and POP operations of STACK.
11. How to implement the linked list? Explain it.
12. Explain the binary tree representation.

Section –V

13. Convert the following infix expression to their prefix equivalents:

(A+B^D)/((E+F/D))

14. Convert the following infix expression to their postfix equivalents:

(A+B) * (C+D)

15. Convert the following infix expression to their prefix equivalents:

A + B + C + D

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