MIDNAPORE CITY COLLEGE ESTD 2017 CENTRAL LIBRARY

Group - B

Answer any ***four*** questions : 5×4=20

9. Write an algorithm to insert an element in a circular queue.
10. Write an algorithm to insert a node in a specified position of a linked list.
11. Briefly describe Hashing techniques with its collision resolution strategies.
12. What is the difference between Linked List and Array?
13. Implement the PUSH operation using linked list.
14. Explain Big Oh, Omega and Theta notation.

Group - C

Answer any ***two*** questions : 10×2=20

15. Write an algorithm for inserting and deleting a node in a Binary Search Tree (BST).
16. Describe in detail about Merge sort algorithm with example.
17. What is the advantage of Linked List? Write down an algorithm for searching an element in a Linked List. 3+7
18. Write and explain bubble sorting algorithm and its time complexity.

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2024

2nd Semester Examination

BCA

MIDNAPORE CITY COLLEGE ESTD 2017 CENTRAL LIBRARY

Paper : C 4-T

(Data Structure)

Full Marks : 50 Time : Two Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

Group - A

Answer any ***five*** questions : 2×5=10

1. Define non-linear data structures.
2. Differentiate between data structure and storage structure.
3. What are the applications of spanning tree?
4. What do you mean by space complexity?
5. Construct a BST for the following keys :

   10, 20, 5, 15, 7, 11
6. What is Inorder Traversal?
7. Define Hashing.
8. What do you mean by probing?

P.T.O.