(BCA21SK) (1501-21K)

B.C.A. DEGREE EXAMINATION,
SEPTEMBER/OCTOBER 2022.

(Regular & Supplementary)

First Year — Second Semester

Paper II — DATA STRUCTURES

Time : Three hours Maximum : 75 marks

SECTION A – (5 × 5 = 25 marks)

Answer any FIVE questions

1. Write about abstract data types.
2. Explain One dimensional Array.
3. What are the applications of stack.
4. Explain de queue:
5. Write the properties of Binary Trees.
6. What is BST? How it differs from binary tree?
7. Explain representation of Graphs.
8. Write about topological sort.
9. Explain Bubble sort.
10. What is Binary Search?

SECTION B – (5 × 10 = 50 marks)

Answer any FIVE of the following

11. Explain linear and Non-linear data structures.

12. Explain single linked list with example.

13. Briefly explain Queue with operations and applications.

14. Explain circular Queue.

15. Explain Binary Tree with types.

16. Briefly explain Various Operations on a binary search Tree.

17. Define Graph. Explain DFS with e ples.

18. Explain in detail about minimum spanning tree

19. What is sorting? Explain Quicksort with algorithm and example.

20. Explain Merge sort with suitable example.
