51

D3BCS2103 (PAGES 2) Reg.No.....

Name: .....

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2022
(Regular/Improvement/Supplementary)

COMPUTER SCIENCE
GBCS3B04T: DATA STRUCTURES USING C

Time: 2 Hours **Maximum Marks: 60**

SECTION A: Answer the following questions. Each carries *two* marks.
(Ceiling 20 Marks)

1. What is meant by time space trade-off?
2. Define String.
3. What is meant by traversal?
4. Write the algorithm for push operation.
5. Draw the linked list representation of queue.
6. What is the use of polish notation?
7. Differentiate between preorder and postorder with example.
8. Explain the terms degree, vertex, edge and leaf.
9. What are the different types of searching?
10. What is hashing?
11. Give an account on graph.
12. What are the types of graphs?

SECTION B: Answer the following questions. Each carries *five* marks.
(Ceiling 30 Marks)

13. Describe applications of data structure.
14. Explain first pattern matching algorithm.
15. Write down the algorithms for any two linked list operations.
16. Describe stack operations with figure.
17. Differentiate simple queue from priority queue with figure.
18. Explain deletion operation in BST.
19. Describe selection sort with example.

SECTION C: Answer any *one* question. Each carries *ten* marks.

20. Explain types of array and its representation in detail.
21. What is tree? Elaborate different types of trees with example.

(1x 10 = 10 Marks)