[21-BS225]

AT THE END OF SECOND SEMESTER (CBCS PATTERN) DEGREE EXAMINATIONS

COMPUTER SCIENCE-II DATA STRUCTURES USING C

UG PROGRAM (4 YEARS HONORS)

(W.e.f. Admitted Batch 2020-21)

Time : 3 Hours **Maximum : 75 Marks**

SECTION-A

I. Answer any **FIVE** questions. **(5×5=25)**

1. What are the differences between Abstract data type and data structures?
2. Write about pointers and arrays.
3. Write different applications of stack with examples.
4. Briefly explain different types of Binary Trees.
5. Distinguish between Binary search and indexed sequential search.
6. What are tips and techniques for writing programs in C?
7. Explain the advantages of double linked list over single linked list.
8. State the algorithm for insertion and delete an element from queue.

SECTION - B

II. Answer **ALL** the questions (5×10=5

9. a) Explain about primitive and Non-primitive da structures.

(OR)

b) Write about Time Complexity and Big 'O Notation.

10. a) Define an array. Explain different types o arrays with example.

(OR)

b) What is linked List? Explain different type of linked lists in data structures.

11. a) What is stack? Write a program to implemen stack using linked list.

(OR)

b) What is Circular Queue? Write a program t explain its operations.

12. a) Write about different Tree Travelin Techniques.

(OR)

b) What is Threaded Binary Tree? Explain i detail.

13. a) Explain selection sort technique wit example.

(OR)

b) What is Searching? Explain Binary search algorithm with example.