Roll No. ..... **Total No. of Pages : 01**

Total No. of Questions : 07

B.Sc. (IT) (Sem.–2nd)
DATA STRUCTURES THROUGH 'C'
Subject Code : BS-108
Paper ID : [B0408]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY.**
2. **Attempt any FOUR questions from SECTION-B.**

SECTION-A (10 × 2 = 20 Marks)

l. Write short notes on :

(a) What is an Algorithm?

(b) What is array of pointers?

(c) What are various operations on Strings?

(d) What are Linked Lists?

(e) What is Linked representation of Sparse Matrix?

(f) Differentiate between Postfix and Prefix notation.

(g) What is a Priority Queue?

(h) What is Dequeue?

(i) What are Binary Search Tree ?

(j) What is sorting?

SECTION-B (4 × 10 = 40 Marks)

2. Discuss the various common matrix operations. Elaborate your answer with suitable programs in C. 10

3. What is relationship between Pointers and Strings? Explain two dimensional array of strings. 10

4. What are Circular Linked Lists? Explain the delcirq(), cirq–display function associated with Circular Linked Lists. 10

5. What are Stacks? What are the various applications of stacks? 10

6. Explain in detail the Linked representation and Array representation of Binary Tree. 10

7. Explain in detail Linear Search and Binary Search. 10