

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 07

B.Sc. (G & W.D / I.T) / BCA (Sem.–3)

DATA STRUCTURES

Subject Code : UGCA-1915

M.Code : 78181

Date of Examination : 23-06-2025

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. Write briefly :

- a. Data Structures
- b. Strings
- c. Hashing
- d. Sparse Matrix
- e. Binary Search Tree
- f. CRT
- g. Dangling Pointer
- h. Small 'o' Notation
- i. Queue
- j. Heap

SECTION - B

2. What is a pointer? How dynamic memory is allocated?
3. Give an example of postfix expression. How to evaluate it using stacks?
4. Differentiate between bubble, selection and insertion sorting.
5. Write a note on AVL tree and B-Trees.
6. What is a linked list? Write algorithm to insert a node in doubly linked list.
7. How graph is represented in adjacency matrix? Write the applications of graphs .

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.