

Roll No.

Total No. of Pages : 02

Total No. of Questions : 16

B.Sc. (IT) / BCA (Sem.-3)

DATA STRUCTURES

Subject Code : UGCA-1915

M.Code : 78181

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

Write briefly :

- 1) Dangling Pointer
- 2) Define Array
- 3) Big 'O' Notation
- 4) Define Stack
- 5) Hashing
- 6) Sparse Matrix
- 7) Reverse Polish Notation
- 8) out-degree
- 9) Sorting
- 10) Recursion

SECTION-B

- 11) What is a pointer? How dynamic memory is allocated?
- 12) Explain depth first search and breadth first search in graphs.
- 13) How to convert in-fix notation into post-fix notation?
- 14) How complexity of an algorithm is checked? Explain its types.
- 15) What is a Queue? Write algorithm to insert and delete a node in circular queue.
- 16) What is BST? Explain its traversals with an example.