

Roll No.

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Total No. of Pages : 02

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BCA (2014 to 2018) (Sem.-3)

DATA STRUCTURES

Subject Code : BSBC-302

M.Code : 10058

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION 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 a student has to attempt any FOUR questions.**

SECTION-A

1. Answer briefly :

- a) Write the use of pointers in data structure.
- b) What is FIFO in Queue?
- c) What is an array representation?
- d) Give introduction of sectors in storage device.
- e) Define the need of searching techniques.
- f) Discuss Garbage collection.
- g) Write basics of Priority queues.
- h) How does recursion work?
- i) Write concept of insertion sort.
- j) Give the applications of linked list.

SECTION-B

2. What are steps involved in problem analysis? Write types of data structures and their applications?
3. How Big-O Notation is used to analyze the algorithm in data structures? Show with example.
4. How do we convert infix expressions to prefix expressions? Give example.
5. Explain dynamic storage management. How it is done in data structures?
6. What do you mean by Doubly Linked List? Write an algorithm to create a node in Linked List.
7. Explain Binary tree representation. Give the syntax by taking an example.

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