

Roll No.

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Total No. of Pages : 02

Total No. of Questions : 07

BCA (2013 & Onward) (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

Q1 Answer briefly :

- a) What is algorithm analysis in data structure?
- b) What is pointer, give example?
- c) Write about sectors in storage devices.
- d) How time complexity of an algorithm is computed?
- e) What is generalized list in data structure?
- f) What is the purpose of garbage collection?
- g) Write advantages of circular queues.
- h) What is the concept of recursion?
- i) How does bubble sort work?
- j) Give some applications of stack.

SECTION-B

- Q2 How queues are represented in memory? Write their applications.
- Q3 Discuss the steps of Big O notation and time trade off.
- Q4 What is Stack? Why it is known as LIFO? Write an algorithm using PUSH and POP.
- Q5 What do you mean by Link list? Write an algorithm to insert a node in Singly Linked List.
- Q6 Explain Inorder, Preorder and Postorder Traversal operation on Binary tree with example.
- Q7 How does a linear search algorithm work? Give the syntax by taking an example.

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