Roll No. _____ S-1120

BCA IInd Semester Examination, 2018

Paper – 1st

[Data Structure]

Paper Code-(BCA-601)

Time : 03 Hours] [Maximum Marks : 70

Note:- Attempt any four Questions in all. All questions carries equal marks.

1. (a) Define Data structure and what are the operations to be performed on data structure.

   (b) Define Array and what are the limitations of an Array?

2. (a) Write an algorithm to find the location of an elements in the given linked list? is the binary search will be suitable for this search? Explain the reason.

   (b) What is link list? What are the different kinds of link list used in data structure?

3. (a) Explain the differences between stack and Queue.

   (b) Converts the following infix expression to postifix expression:

A* (B+D)/C-E*(F+G/H)

P.T.O.

(58)

4. (a) Compare linear search algorithm with binary search algorithm.

(b) What is binary search tree? How its is different from extended binary tree?

5. (a) Explain prefix and infix expressions with example.

(b) What is queue? Write an algorithm to implements queue?

6. (a) What is meants by traversal? What do you understand by in order, pre order & post-order traversal?

(b) What do you understand by priority Queue. Mention some applications of priority Queues.

7. Write short, notes on any four :

(a) Circular Queue

(b) Garbage collection

(c) algorithm Complexity

(d) Sparse Matrices

(e) Stack

(f) Binary search tree

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