SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL NO : | | | | | | | | | | | | | **Total number of pages:[ ]**

Total number of questions:07

BCA(3rd sem.)

DATA STRUCTUR

Reappear 2011-15 Batch

Subject Code :BSBC-302

Paper ID : May 2018

]

Max Marks:60

Time allowed: 3 Hrs

Important Instructions:

- **Section A is compulsory**
- **Attempt any four questions out of six questions from section B**
- **Assume any missing data**
- **Additional instructions, if any**

PART A (2×10)

Q. 1. Answer in brief:

(a) What do you mean by Data Structure?
(b) What are the drawbacks of Array?
(c) What is time space trade off?
(d) Why Stacks are called LIFO data structure?
(e) What is a node?
(f) What is recursion?
(g) Create a node for double linked list?
(h) What is polish notation?
(i) What are maximum numbers of nodes in binary tree with depth n?
(j) What is sorting?

PART B (8×5)

Q. 2. Explain the various operation possible on linked list?
Or
Explain two way linked list with c++ program? (CO1)

Q. 3. Write the algorithms for insertion and deletion in stack?
Or
Write a note on different types of Queue? (CO2)

Q. 4. Write an algorithm to perform various tree traversal methods. Give Example?
Or
Write an algorithm for creating a binary tree? (CO3)

Q. 5. Write a program in C++ to sort a list of n numbers using selection sort?
Or
Write a program for linear search? (CO5)

Q.6. Write the algorithm to insert the elements in a binary search tree?
Or
Write an algorithm for Bubble Sort? (CO5)

Q.7. Translate the following infix notation into postfix expression using stack
A*(B+C)/(G+H/K)
Or
A+B-C/D*F (CO4)