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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- April 2019

B.Tech/ 2<sup>nd</sup> Semester

COURSE CODE: 14B21CI211

MAX. MARKS: 25

COURSE NAME: Basic Data Structures

COURSE CREDITS: 04

MAX. TIME: 1.5

*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

1. Write the code to create and implement a priority queue. (3)
2. Convert the following infix to postfix notations (6)
  - I.  $P+Q^{\wedge}R$
  - II.  $((A-B)/C+(X*Y))\$(P\backslash Q)$
  - III.  $X+Y/(C/Z\$E)$
3. Describe the implementation of a stack using linear linked list. Write the code for creating an empty stack, testing stack for underflow, overflow, push and pop operations. (5)
4. Arrange the following list in ascending order using bubble sort (5)  
20, 35, 40, 100, 3, 62
5. Write the code to create a circular linked list. (3)
6. Write the pre order, post order, and in order traversal of the following tree (3)

