



Enrolment No. _____

HASMUKH GOSWAMI COLLEGE OF ENGINEERING, VAHELAL

MID SEMESTER EXAMINATION, SEPTEMBER-2016

Subject Code: 2130702

Date: 26/09/2016

Subject Name: Data Structure

Sem: 3RD

Time: 10:00 TO 10:50

Total Marks: 20

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- QUE.1** (A) Define the following Terms with Example: 3
1) Recursion
2) Siblings
3) Full Binary Tree
- (B) Define data structure and explain types of data structure. 3
- QUE.2** (A) Explain Circular Queue as ADT. 3
- (B) Convert the following infix expression to postfix using stack. 4
 $A ^ (B + (H - C) / D + E ^ F) * G$
- OR**
- (B) Convert the following infix expression to prefix using stack. 4
 $A ^ (B + (H - C) / D + E ^ F) * G$
- QUE.3** (A) Explain Bubble Sort Algorithm. 3
- (B) Construct the tree using given Pre-order and In-order traversal. 4
Pre-order: 73, 38, 26, 53, 40, 83, 79, 86, 90
In-order: 26, 38, 40, 53, 73, 79, 83, 86, 90
- OR**
- (A) Explain Selection Sort Algorithm. 3
- (B) Explain AVL Tree and Construct AVL tree for the following Sequences: 4
50, 40, 30, 45, 48, 60

***** ALL THE BEST *****