P P SAVANI UNIVERSITY
P P SAVANI SCHOOL OF ENGINEERING
3rd Semester of B Tech Examination (2nd Internal Exam)

Subject: Data Structures (SECE2031)
Branches: CE/IT

[Date: 08/10/2018, Monday] [Time: 11.00 A.M. to 12.00 P.M.] [Total Marks: 30]

Instructions:
- Figures to the right indicate full marks.
- Q 1 & 2 are compulsory.
- Use of scientific calculator is allowed.
- Draw neat and clean drawings & Assume suitable data if necessary.

Q.1	Answer in one Sentence.	(05)
	1. Define Tree.	
	2. What are the different ways of representing a binary tree?	
	3. Explain inorder, postorder tree traversal.	
	4. what are the various rotations of balancing an unbalanced tree?	
	5. Explain linear search.	
Q.2.A	Explain sequential, dynamic and threaded representation of a binary tree.	(05)
Q.2.B	What is searching? Explain difference between linear and binary search and write an algorithm for binary search.	(05)
Q.3.A	Explain concept of insertion sort with example.	(05)
Q.3.B	Explain Graph traversal techniques with example.	(05)

OR

Q.3.A	Explain concept of bubble sort with example.	(05)
Q.3.B	Explain Tree traversal techniques with example.	(05)
Q.4.A	Explain AVL tree in detail.	(05)

OR

Q.4.A	Explain 2-3 tree with example.	(05)