**UNIVERSITY COLLEGE OF ENGINEERING (BIT CAMPUS) TIRUCHIRAPPALLI-620 024**

**Third Internal Assessment Test**

**Department of CSE / IT**

**Subject Code :** EC8393

**Subject Name :** FUNDAMENTALS OF DATA STRUCTURES IN C

**Date & Duration :** 16.10.2018 & 1.30Hrs **Marks: 50**

**Degree/Branch:** B.E/ECE Sec’A’ **Year/Semester:** II / III

**PART-A**

**Answer *All* Questions 7 x 2 = 14**

1. What is meant by internal and external sorting?
2. Write any four applications of queues.
3. What is the advantage of linked list over arrays?
4. Define complete binary tree.
5. Define binary tree and give binary tree node structure.
6. Sort the following numbers using insertion sort- 3,1,4,1,5,9,2,6,5
7. What is hashing?

**PART-B**

**Answer any three Questions 3 x 12 = 36**

1. What is stack? Explain about the implementation of stack using Linked list.
2. Explain in details about the binary tree traversals.
3. How do we represent the graph? Write a short on following:

i. Breadth first traversal

ii. Depth first traversal

1. Explain about quick sort and write a c program.

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**PART-B**

**Answer any three Questions 3 x 12 = 36**

8. What is stack? Explain about the implementation of stack using Linked list.

9. Explain in details about the binary tree traversals.

10. How do we represent the graph? Write a short on following:

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11. Explain about quick sort and write a c program.