

Register Number :

Name of the Candidate :

6 0 7 6

B.E. DEGREE EXAMINATION, 2008

(ELECTRONICS AND COMMUNICATION ENGINEERING)

(THIRD SEMESTER)

**ECEC-306. DATA STRUCTURES AND C++
PROGRAMMING**

May] [Time : 3 Hours

Maximum : 60 Marks

*Answer any ONE full question from each Unit.
All questions carry equal marks.*

UNIT - I

1. (a) Explain structures in C. (6)
- (b) Create a linked list and perform the following operations.
 - (i) Insert a Node. (3)
 - (ii) Delete a Node. (3)

Turn over

- 2. (a) Explain queues and its representation in detail. (6)
- (b) Differentiate stack and queue with example. (6)

UNIT - II

- 3. What is a Binary Tree ? Explain the tree traversal techniques in detail with examples. (12)
- 4. Explain about selection sorting and tree searching. (12)

UNIT - III

- 5. (a) Bring out the difference between the traditional approach and object orientation. (6)
- (b) Write a program in C++ to maintain student's record of an university. (Name, sex, Register No, branch, year). (6)
- 6. (a) Explain the concept of Inheritance and Polymorphism. (6)
- (b) Explain briefly the flexibility in Software Development. (6)

UNIT - IV

- 7. (a) Explain constructors and destructors. (4)
- (b) Explain structures and structure within structure in detail with relevant examples. (8)
- 8. (a) Explain function overloading and in - line function. (6)
- (b) Explain arrays and their usefulness in object orientation. (6)

UNIT - V

- 9. (a) Explain derived class and base class. Also, state the differences between them. (8)
- (b) Explain in brief, the various modes of Graphics. (4)
- 10. Explain the various file operations with the help of a program. (12)