2426	BCA-02

B.C.A. DEGREE EXAMINATION – JANUARY, 2006.

First Year

'C' PROGRAMMING AND DATA STRUCTURE

Time : 3 hours   Maximum marks : 60

PART A — (4 × 5 = 20 marks)

Answer any FOUR questions.

1. Explain an entry – controlled loop and an exit – controlled loop in C.

2. What are function calls? Explain.

3. Discuss the basic operations performed on queues.

4. Explain the adjacency matrix of a graph by giving an example.

5. Write short notes on spanning trees.

6. What is meant by traversal of Binary trees? Discuss the different ways of traversing binary trees.

PART B — (4 × 10 = 40 marks)

Answer any FOUR questions.

7. List the applications of stack and explain any one in detail.

8. Explain Binary search by giving a suitable algorithm to implement the process.

9. What are the basic operations that can be performed on a doubly linked list? Explain how to insert a new node at the end of the list.

10. Discuss the advantages and disadvantages of sequential and direct file organisations.

11. Explain by giving examples the various storage class specifications included in C.

12. Write short notes on :

    (a) Garbage collection.

    (b) Data storage.