



Reg. No. :

Name :

**Third Semester B.Tech. Degree Examination, September 2014
(2008 Scheme)
(Special Supplementary)**

08.304 : PROGRAMMING IN C++ AND DATA STRUCTURES (TA)

Time: 3 Hours

Max. Marks: 100

PART – A

Answer **all** questions; **each** question carries **4** marks.

- I. a) Explain the meaning of the given statement with the help of an example :
even = (value %2 == 0) ? TRUE : FALSE.
- b) Write a program to generate Fibonacci series.
- c) Explain call by value using example.
- d) Explain macro function using example.
- e) Write a program that prints the factorial of a given number using operator overloading.
- f) Explain friend function using example.
- g) Briefly explain exception handling.
- h) Explain templates using example.
- i) Briefly explain binary tree.
- j) Differentiate between array and linked list.



PART – B

Answer **any two** questions from **each** Module. **Each** question carries **10** marks.

Module – I

- II. Explain call by reference using example.
- III. What is meant by a recursive function ? Write a C++ program to find the factorial of a given number using recursive function.
- IV. Write a program to find the product of 2 matrices.

**Module – II**

- V. Explain virtual function using example.
- VI. Explain function overloading using example.
- VII. Write a program in C++ to create a library information system using class containing the following for all books in the library data members.
 - a) Access number
 - b) Name of the author
 - c) Title of the book
 - d) Price of the book
 - e) Publisher's name
 - f) Number of copies.

Member functions :

- a) To add a new book to the list of books in the library.
- b) To delete a book from the list of books.
- c) To display names of books, author's name and price of each book.

Module – III

- VIII. Write a C++ program to sort 'n' numbers using bubble sort.
- IX. Write a C++ program to sort 'n' numbers using quick sort.
- X. Write a C++ program to illustrate the stack operations (push and pop).