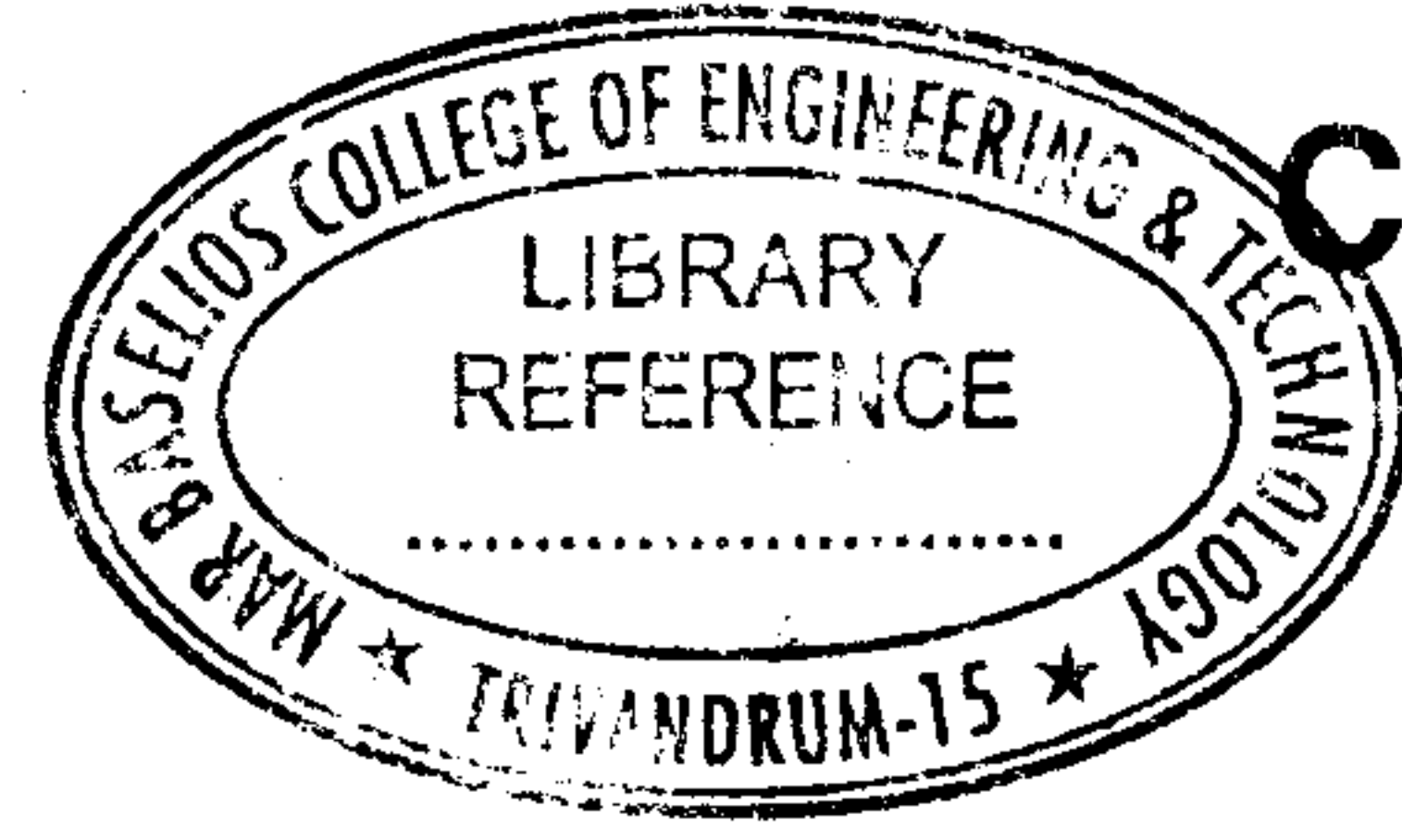




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C - 5367

Reg. No. : .....

Name : .....

**Third Semester B.Tech. Degree Examination, October 2017  
(2008 Scheme)**

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

*Electrical.  
Electronics*

Time : 3 Hours

Max. Marks : 100

**PART - A**

Answer **all** questions. **Each** question carries **4** marks.

1. Write a program in C++ to solve a quadratic equation.
2. How do the do-while loop differ from the while loop ? Explain with example.
3. What is meant by call by reference and call by value ?
4. Write a function in C++ to generate a Fibonacci series of n numbers, where n is defined by the programmer.
5. What is a macro ? How it is different from a preprocessor ?
6. Write a program to find the square of a given number belonging to the three data types, integers, floating point and double precision numbers using function overloading.
7. Differentiate between early binding and late binding.
8. What is a template ? List the merits and demerits of using a template in C++.
9. What is big-O notation ?
10. What are the basic operations performed on a queue ?

P.T.O.



## PART – B

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

**Module – I**

11. An election is contested by five candidates. The candidates are numbered 1 to 5 and the voting is done by marking the candidate number on the ballot paper. Write a program to read the ballots and count the votes cast for each candidate using an array variable count. In case, a number read is outside the range 1 to 5, the ballot should be considered as a 'spoilt ballot' and the program should also count the number of spoilt ballot.
12. a) What are inline functions ? Explain with example. 5  
b) Write a program to reverse the digits of a number. 5
13. Write an interactive program for manipulation of matrices. Support addition, subtraction and multiplication operations on them. Create matrices dynamically.

**Module – II**

14. Write a program for negation of a complex number using unary operator overloading.
15. What is inheritance ? What are the different classes of inheritance ? Explain each with suitable examples.
16. Write a program to create two files odd and even. A set of numbers stored in an array has to be written to these files; odd numbers to be written in the file named odd and even numbers to be written in the file named even. Also display the contents of the files on the screen.

**Module – III**

17. The names of students in the two divisions of the plus two classes of a school are stored in two arrays A and B. Use merge sort algorithm to prepare a list of all the students in alphabetical order.
18. Implement a queue using linked list. Also create functions to delete an element from the queue.
19. What are the basic operations performed on a linked list ? Illustrate with a suitable program.
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