Code No.: **5006/N**

FACULTY OF ENGINEERING AND INFORMATICS
B.E. 1 Year (New) (Common to all branches (Suppl.))
Examination, January 2012
PROGRAMMING IN C AND C++

Time: 3 Hours]   [Max. Marks: 75

***Note : Answer all questions from Part A, answer any five
questions from Part B.***

PART A   (10x2^1/$_2$=25 Marks)

1. What is an operating systems ?

2. Assuming that C language allocates 2 bytes for integer, write minimum and maximum values of integer.

3. What is the output of the following code fragment ?

    int x [4] = { 4, 5, 9, 10}

    int + p/r = x;

    p/r + = 2;

    printf ("%d", + p/r);

4. What is the difference between static and automatic variables ?

5. What is the difference between —> and . operators ?

6. What does fopen return if successful and it unsuccessful ?

7. What is a copy constructor ? Give its prototype.

8. What is a virtual destructor ?

9. What operators are used to allocate and deallocate dynamic memory in C++ ?

10. What are the advantages of template finding in C++ ?

PART — B   **(5x10=50 Marks)**

11. a) Draw the flow chart to calculate the roots of a quadratic equation.

    b) Write a program to print multiplication table of 4 upto n terms.

12. a) Write a function to reverse a given string and use it to check whether the given string is a palindrome or not.

    b) Write a program to search an element in a sorted list of integers using binary search.

13. a) Explain the effect of ++ and — — operators with pointers of all types.

    b) Write a program to display contents of a given text file.

14. Write a class to implement following operating an money object :

    i) Addition

    ii) Subtraction

    iii) Multiplication by a given integer. Assume that money object contains rupees and paise as data members.

15. a) In one class contains another class as a member, in what order are the two class constructors called ? Illustrate with an example.

    b) What is the importance of this point and in the call to the function using base class points ?

- 16. Write C program to read sessional marks, attendance and Roll No. of students print the Roll No. of students who are detained due to shortage of attendance or sessional marks. Use structures to store details of students.

17. Write short notes on :

    a) Conditional compilation

    b) Templates and inheritance

    c) Parameter passing techniques.

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