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**MCA/IIIS/306/13(Pr.)**

**MCA 3rd Semester Examination, 2013**

**OPP. LAB**

**( Practical )**

**PAPER – CS/MCA - 306**

**Answer any **one** question from each Group**

**GROUP – A**

**(C++)**

- 1. Find the sum of two no.s using inline function.**
- 2. Find the factorial of any no. using friend function.**
- 3. Write a C++ program to define a class matrix and find the multiplication of two matrices.**
- 4. Find the sum of two complex number using operator overloading.**
- 5. Write any program to implement virtual base class.**
- 6. Using class, find the sum of cos series.**

**( Turn Over )**

( 2 )

7. Find the value of  ${}^n C_r$  using call by reference.
8. Demonstrate the single Inheritance.
9. Demonstrate the hybrid inheritance.
10. Define a STUDENT class with name, roll and obtained marks. Declare an array of 10 student objects. Use appropriate function to find the top student and display all students by marks wise.

GROUP – B

(Java)

11. Find all prime numbers between a given range.
12. Find the nature of the roots and roots of a quadratic equation.
13. Using Bubble sort, sort the numbers.
14. Take input the name of five persons as command line arguments and display the names in ascending order.

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15. Write a menu driven program to check a no. is

(i) Even or odd

(ii) Perfect square or not

(iii) Palindrome or not.

16. Demonstrate the multiple inheritance using interface.

17. Display the string changing its case

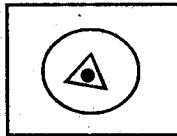
eg. I am a student will be

i AM A sTUDENT.

18. Using applet draw the following figure



19. Using applet draw the following figure



20. Demonstrate the package.

( 4 )

21. Find the area of circle, square, triangle, rectangle using method overloading.

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