

Register Number: .....

**M.C.A DEGREE EXAMINATIONS: JUNE 2012**

Second Semester

**MASTER OF COMPUTER APPLICATIONS**

MCA506: Object Oriented Programming

**Time: Three Hours**

**Maximum Marks: 100**

**Answer ALL Questions:-**

**PART A (10 x 2 = 20 Marks)**

1. What is meant by programming paradigm?
2. What are the differences between C and C++.
3. Define data abstraction.
4. What is a destructor?
5. What are the different types of constructor?
6. List the operators that cannot be overloaded?
7. Differentiate between Private and Protected access specifier.
8. What is meant by pure virtual function and give its syntax?
9. List out three types of container.
10. Differentiate between get( ) and getline( ) functions.

**PART B (5 x 16 = 80 Marks)**

11. a) (i) Describe the characteristics of object oriented programming (8)
- (ii) Explain the following object oriented features
- 1) Abstract Type (4)
  - 2) Concrete Type (4)

**(OR)**

- b) Write a program in C++ to implement stack operations (such as push, pop, overflow, underflow, destroy) using class
12. a) Explain the following with an example
- 1) Inline function (5)
  - 2) Static member function (5)
  - 3) Dynamic allocation (6)

**(OR)**

- b) Write a C++ program to find the sum of two entered complex numbers from two different classes and display the sum using a common friend function to two classes

13. a) (i) Explain copy constructor with example (6)

- (ii) Write a C++ program to calculate and display the cube of an integer, float and double number using function overloading (10)

**(OR)**

b) (i) Describe in detail about operator overloading with example. (10)

- (ii) Explain the limitations and restrictions for overloading operator. (6)

14. a) Explain different types of inheritance. Give an example for each type that will fit in their structure.

**(OR)**

b) (i) Explain in detail about virtual function with example. (8)

- (ii) Briefly describe about exception handling with suitable example. (8)

15. a) Write a C++ program to enter an integer array into a file using write() function and then access the numbers using read() function.

**(OR)**

b) (i) Briefly discuss about Standard Template Library (STL). (8)

- (ii) Describe about various string handling functions in String class. (8)

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