

Roll No .....

**MCA - 303**  
**MCA III Semester**  
Examination, June 2014  
**Object Oriented Methodology And C++**

*Time : Three Hours*

*Maximum Marks : 70*

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
- ii) All parts of each question are to be attempted at one place.
- iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.
- iv) Except numericals, Derivation, Design and Drawing etc.

**Unit - I**

1. a) What is the difference between a copy constructor and an overloaded assignment operator? 2
- b) What is encapsulation? 2
- c) What is the difference between new/delete and malloc/free? 3
- d) Write a C++ program to add two distance such as (11 feet 6.25 inches and 17 feet 5.75 inches) using concept of constructor overloading. 7

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PTO

[2]

OR

Write a C++ program to add two complex objects (Complex number contains real and imaginary parts) using friend function.

**Unit - II**

2. a) What is "this" pointer? 2
- b) Write a function that swaps the values of two integers, using int\* as the argument type. 2
- c) What is the difference between char a [] = "string"; and char \*p = "string";? 3
- d) Explain different types of inheritance with suitable example. 7

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OR

Define a class complex (Complex number contains real and imaginary parts). Use overloaded "+" operator to add two complex number.

**Unit - III**

3. a) What is a "pure virtual" member function? 2
- b) What is the difference between method overloading and method overriding? 2
- c) What is a friend? Do friends violate encapsulation? 3
- d) Explain virtual function with C++ program. 7

OR

[3]

Explain term Polymorphism How is Polymorphism achieved at

- i) Compile time and ii) Run time

**Unit - IV**

4. a) What do you mean by exception? 2
- b) What is a stream? 2
- c) What are tellg ( ) and tellp ( ) functions in C++? 3
- d) Explain mechanism of exception handling. 7

OR

What are the various classes available for file operations?

**Unit - V**

5. a) What are the three types of modeling in UML? 2
- b) What is use case diagram? 2
- c) Write the name of diagrams in UML. 3
- d) How a UML use case is diagram different from a traditional flow chart? 7

OR

Explain different relationship between classes.

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