Roll No. ....

67045

M.C.A. 1st Sem. w.e.f. Dec. 2012 with New Notes (Current Scheme)

Examination–December, 2014

Object Oriented Programming Using C++

Paper-MCA-105

Time : 3 hours   **Max. Marks : 80**

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

Note : Attempt **five** questions in all Q. No. **1** is

compulsory. Attempt **four** more

questions selecting **one** from each unit.

All questions carry equal marks.

1. Answer the following questions briefly :

   (a) List advantages of arrays.

   (b) What is object copying ?

(c) Define derived classes.

(d) Write uses of recursion in C++.

(e) Explain static members.

(f) Describe iostreams.

(g) Write uses of new.

(h) List advantages of inheritance.

Unit-I

2. (a) What are pointers ? How these are useful and used ? Discuss in detail with examples and C++ codes.

   (b) Discuss uses and advantages of encapsulation in C++ with examples.

3. Explain the following briefly with suitable examples :

   (a) Recursion and its importance in C++.

(b) Uses and advantages of functions in C++.

Unit-II

4. (a) What are constructors ? How these are useful and used ? Explain with examples and C++ code segments.

    (b) Explain types and advantages of inheritance in detail with C++ codes.

5. Describe the following with examples :

    (a) Use of virtual functions in C++.

    (b) Object initialization and its methods.

Unit-III

6. (a) Define copy constructor ? How it is used and useful ? Explain with suitable examples and C++ code segment.

    (b) Write a program in C++ to overload "+" and "−" (minus) operators.

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7. Explain the following with examples :   *16*

    (a) Role of friend function in C++ and its advantages.

    (b) Exception handling and its merits in C++.

Unit-IV

8. (a) Define template classes ? How these are used and useful ? Discuss with examples and with C++ codes.

    (b) Explain namespaces, hashes and strings in C++ through examples.

9. Explain the following with examples :

    (a) Generic programming in C++ and its advantages

    (b) Template functions in C++

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