

Roll No. ....

**67045**

**M.C.A. Ist Sem. w.e.f. Dec. 2011 (New)**

**Examination – December, 2012**

**OBJECT ORIENTED PROG. USING C++**

**Paper : MCA-105**

*Time : Three hours ]*

*[ Maximum Marks : 80*

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

*Note : Question No. 1 is compulsory. Attempt four more questions, selecting one question from each Unit.*

1. Answer the following questions briefly :  $8 \times 2 = 16$

- (a) List advantages of pointers.
- (b) What is object slicing.
- (c) Define derived classes.
- (d) Write uses of looping in C++.
- (e) Explain static members.
- (f) Describe iostreams.

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- (g) Write uses of new.
- (h) List advantages of polymorphism.

### UNIT - I

- 2. (a) What are arrays? How these are useful and used ?  
Discuss in detail with examples and C++ codes. 8
- (b) Discuss uses and advantages of pointers in C++  
with examples. 8
- 3. Explain the following briefly with suitable  
examples : 8 each
  - (i) Recursion and its importance in C++.
  - (ii) 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. 8
- (b) Explain use and advantages of inheritance in  
detail with C++ codes. 8
- 5. Describe the following with examples : 16
  - (a) Use of virtual functions in C++.
  - (b) Object initialization and its methods.

### UNIT – III

6. (a) What is copy constructor? How it is used and useful? Explain with suitable examples and C++ code segment. 8
- (b) Write a program in C++ to overload "+" and "-" (minus) operators. 8
7. Explain the following with examples : 8 each
- (i) Use of friend function in C++ and its advantages.
- (ii) Exception handling and its merits in C++.

### UNIT – IV

8. (a) What are template classes? How these are used and useful? Discuss with examples and with C++ codes. 10
- (b) Explain namespaces, hashes and strings in C++ through examples. 6
9. Explain the following with examples: 16
- (i) Generic programming in C++ and its advantages
- (ii) Template functions in C++