

67045

**MCA 1st Semester Current Scheme with new notes  
Maximum Marks scheme 80 Examination,  
December– 2015  
OBJECT ORIENTED PROGRAMMING USING C++  
Paper–MCA–105**

*Time allowed : 3 hours ] [Maximum marks : 80*

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

1. Answer the following questions briefly :
  - (a) List advantages of friend function in C++.
  - (b) What are iostreams.
  - (c) Define static members in C++.
  - (d) Write uses of templates in C++.
  - (e) Explain prototypes in C++.
  - (f) Describe resource capture.
  - (g) What are unexpected exceptions in C++.
  - (h) List advantages of recursion. 8×2=16

**Unit–I**

2. (a) What are structure and 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

67045–P-3-Q-9-(15)

P.T.O.

3. Explain the following with suitable examples :
- Flow control statements
  - Uses and advantages of dynamic polymorphism in C++.
- 8 each

**-II**

- Define destructor ? How these are useful and used ? Explain with examples and C++ code segment 8
- Explain use and advantages of virtual functions in detail with C++ examples. 8

5. Describe the following with examples :
- Use of object in C++
  - Constructors : advantages. 16

**-III**

- Define memory management ? How it is used and how useful ? Explain with suitable examples and C++ code segment 8
- Develop a program in C++ to overload "+" and "-" (minus) operators. 8

7. Explain the following with examples :
- Prototypes and advantages in C++
  - Object copying in C++.
- 16

**Unit-IV**

- Define template functions ? How these are used and useful ? Discuss with examples and with C++ codes. 8
  - Explain string, hashes and iterators in C++ through examples. 8
- Explain the following with examples :
  - Advantages of Generic programming in C++
  - Role of Template classes in OO programming.