Roll No. .....

67010

MCA 1st Semester (Current) CBCS Scheme w.e.f. Dec.-2016 Examination – November, 2017

OBJECT ORIENTED PROGRAMMING USING C++

Paper : MCA-105 (C)

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 complaint in this regard, will be entertained after examination.

Note : Question No. **1** will be ***compulsory***. Candidate will be required to attempt ***four*** questions from remaining ***eight*** questions. Select ***one*** question from each Unit. Each question carrying **16** marks.

1. (a) What is data abstraction ? $8 \times 2 = 16$

(b) What is message passing ?

(c) What is structure ?

(d) What is this pointer ?

(e) What is resource capture ?

(f) What is iterator ?

(g) What is late binding ?

(h) What is stream ?

UNIT – I

2. (a) How data and functions are organized in an object-oriented program ? Explain. 8

(b) What are the unique advantages of an object-oriented programming paradigm ? Explain. 8

3. (a) What do you mean by dynamic binding ? How it is useful in OOP ? 6

(b) Explain the following with example : 5 + 5

(i) String

(ii) Control statement

UNIT – II

4. (a) Define data members, member function, private and public members with example. 6

(b) How inheritance is basic feature of OOP ? Explain with program which has base class Shape and its derived class Rectangle. 10

5. Explain the following with example : 5 + 5 + 6

(a) Virtual Base class (b) Container class

(c) Constructor

UNIT – III

6. Differentiate between the following with example : 5 + 5 + 6

(a) Compile time polymorphism and run time polymorphism.

(b) Overloading and Overriding.

(c) New and delete keyword.

7. (b) What is exceptional handling ? What kind of exception can be handle and why ? Explain with example with various steps. 10

(b) What is memory management ? How is it implemented in C++ ? 6

UNIT – IV

8. (a) Distinguish between overloaded functions and function templates. Explain with example. 8

(b) Distinguish between the term class template and template class, Explain with example. 8

9. (a) What do you mean by STL ? What are benefits of STL ? Explain adapters, vector, and list. 8

(b) Write a function template for finding the minimum value contained in an array. 8