(ii) Why is it necessary to overload an operator ? 6

(iii) When do we use multiple catch handlers ? 4

7. (i) Explain 'Operator Overloading'. Discuss its rules. 8

(ii) What are the advantages of using exception handling mechanism in a program ? 8

UNIT – IV

8. (i) What is function template and what are the advantages of function template ? 8

(ii) With suitable example, explain how a template function is overloaded with an explicit function. 8

9. (i) How many types of iterators are there in C++ STL ? Explain input and output iterators each with an example. 8

(ii) What is an algorithm ? How STL algorithms are different from the conventional algorithms ? 8

Roll No. .....

67045

MCA 1st Semester Last Session Dec.-15
(With New Notes)
Examination – December, 2016

OBJECT ORIENTED PROGRAMMING 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 complaint in this regard, will be entertained after examination.

Note : Attempt ***five*** questions in all. Question Number **1** is ***compulsory***. Attempt ***four*** more questions, selecting ***one*** question from each Unit.

1. (a) What does polymorphism mean in C++ language ?

(b) Discuss the benefits and applications of OOPs.

(c) What is a class ? Describe the syntax for declaring a class with example.

(d) Differentiate between static and dynamic polymorphism.

(e) How are data and functions organized in an object-oriented program ?

(f) Describe briefly the features of I/O system supported by C++.

(g) What do you mean by dynamic binding ?

(h) How is a member function of a class defined ?

$8 \times 2 = 16$

UNIT – I

2. (i) What do you mean by polymorphism in C++ ? How is it achieved at : 8

(a) Compile time

(b) Runtime

(ii) Discuss the benefits and applications of OOPs. 8

3. (i) When do you meant by overloading of a function ? When do we use this concept ? 4

(ii) Explain how objects are passed to and returned from a member function using pointer. 8

(iii) With suitable example, explain how a function is invoked using pointer. 4

UNIT – II

4. (i) What is a constructer? Describe the types of constructor each with an example. 8

(ii) What is a member function ? Explain the advantages and disadvantages of declaring member function inside and outside the class. 8

5. (i) Write C++ program to overload '+' and "-"to find the sum and difference of two time value given in HH:MM:SS format. 8

(ii) What are the different forms inheritance ? Give an example for each. 8

UNIT – III

6. (i) What is an exception specification ? When is it used ? 6