Roll No. ..... Total Pages : 3

GSM/M-20 **1635**

Computer Science

(Object Oriented Programming with C++)

Paper–I

Time Allowed : 3 Hours] [Maximum Marks : 40

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Answer the following questions in brief : 4×2=8

   (a) Distinguish between static and non-static member functions.

   (b) How constructor is different from other member functions?

   (c) Distinguish between delete and new operator.

   (d) What is 'this' pointer? Give two usages of 'this' pointer.

UNIT–I

2. (a) What is static data members? Explain its use with a suitable example. 4

   (b) How can you access members of a class? Explain two different methods. 4

3. (a) What are benefits of OOP over procedural programming? 4

(b) What is nested class? Explain with an example. How is it different from local class? 4

UNIT–II

4. (a) What is copy constructor? Explain with an example. 4

(b) What is parametrized constructor? Explain the rules of default values to parameters by giving examples. 4

5. (a) Explain formatted I/O in C++ by giving examples. 4

(b) Explain the functions of following stream classes:ios, istream, ostream and iostream_withassign. 4

UNIT–III

6. (a) What are manipulators? Explain the use of any three manipulators. 4

(b) What is friend class? Explain the rules to create a friend class. Give one example also. 4

7. Create a class Book and then create an array of pointers to objects of Book. Demonstrate the use of this array. 8

UNIT–IV

8. (a) What are arithmetic and logical operators in C++? Explain their precedence and associativity rules. 4

   (b) Overload '= =' operator to compare two strings. 4

9. (a) What do you mean by function overloading? Overload 'max' function to return larger of two numbers and to return larger of two strings. 4

   (b) Overload '*' operator to multiply two complex numbers. 4