Roll No. ....   Total Pages : 2

MCA/M-13   **10205**

OBJECT ORIENTED PROGRAMMING WITH C++

Paper–MCA–205

Time Allowed : 3 Hours]   [Maximum Marks : 80

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

1. (a) Diestinguish between binary and text files.
    (b) Distinguish between single and multiple inheritances.
    (c) Explain function overloading with an example.
    (d) Explain array of pointers to an object through an example.
    (e) Distinguish between 'c' and 'c++'.
    (f) Can operator precedence be changed through operator overloading?
    (g) What are the characteristics of a constructor?
    (h) What are the implications of public, protected and private visibility modes?
    (i) What are the advantages of reference variables in parameter passing?
    (j) What is the purpose of the scope resolution operator?
    (k) What are virtual functions?
    (l) Explain scope resolution operator.   2×12

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UNIT–I

2. (a) Discuss the principles of object-oriented programming.   7
    (b) What are constructors? How are they different from the member functions? What is a copy constructor?   7

3. Define a class "ACCOUNT". Include following members: Data Members: Name of Depositors, Account No., Type of Account, Balance Amount. Member Function: To assign initial values, deposit amount , withdraw after checking balance, To display name and balance. Write main Program to test the program for 10 customers.   14

UNIT–II

4. Write a program in C++ that illustrates the concepts of function overloading and function-overriding. 14

5. Explain the overloading of operator '+' to add two complex numbers using a friend function.   14

UNIT–III

6. What are virtual functions? What are the rules for virtual functions? What are the advantages of declaring a virtual functions in a program? What are pure virtual functions? Explain.   14

7. (a) How can protected members of a class become inheritable?   7
    (b) What is multiple inheritance? Explain with the help of an example.   7

UNIT–IV

8. Write a program in c++ to read a file and to (i) display the contents of the file on to the screen (ii) display the number of characters and (iii) number of lines in the file.   14

9. (a) What is class template? Explain.   7
    (b) Explain exception-handling mechanism.   7

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