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BCA/D-20   **1196**

OBJECT ORIENTED PROGRAMMING
USING C++
BCA-231

Time : Three Hours]   [Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit in addition to compulsory Q. No. **1**.

1. (a) Differentiate between structure and class.

    (b) How destructor function is defined ?

    (c) How array of objects are created ?

    (d) What are the functions available in C++ for manipulating strings ?   **4×4=16**

Unit I

2. Explain uses of scope resolution operator giving example.   **16**

3. (a) How class is declared ? How objects are created ? And member functions are called ?

    (b) What are different ways of defining member functions ? Give examples.   **8,8**

Unit II

4. Write a program to add two complex numbers. Use constructors only. **16**

5. Explain various manipulators used for formatting the console I/O. **16**

Unit III

6. (a) What is Friend function ? What are its characteristics ?

(b) Write a program to find average of n numbers ? (Use friend function for finding average). **8,8**

7. (a) What are reference variables ? How are they declared ?

(b) Write a program to interchange the value of two variables by using formal parameters as reference variables. **8,8**

Unit IV

8. (a) What is Operator Overloading ? What are the rules of operator overloading ?

(b) Write a program to overload operator + so that it joins two strings. **8,8**

9. Describe Inline Function. In what situations Inline function does not work ? Give example. **16**