(06/21-II)

5411

B.C.A. EXAMINATION

(For Batch 2011 & Onwards)

(Sixth Semester)

PROGRAMMING IN C++

BCA-361

Time : Three Hours   *Maximum Marks : 80*

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

(Compulsory Question)

1. Very short answer type questions :

    (a) How inheritance support reuse of code ?

    (b) Explain multiple Inheritance with simple example.

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7. (a) What do you mean by exceptions ? How are exceptions handled in C++ ?   8

    (b) Write a C++ program to demonstrate re-throwing of exception.   8

Unit IV

8. Explain the class hierarchy of files that is used in C++ for I/O.   16

9. Write short notes on the following : 4×4=16

    (i) Manipulators

    (ii) File pointers

    (iii) Operations on Files

    (iv) Error handling.

(c) Why constructor and destructors have no return type?

(d) Define function overloading.

(e) Define an Abstract class.

(f) What is a Template class?

(g) Explain Rethrowing an exception.

(h) Differentiate between Text files and Binary files. 8×2=16

Unit I

2. Define Inheritance. Explain various types of inheritance in detail. 16

3. (a) What are constructors? What rules should be followed for creating constructors in a subclass? 8

(b) Explain the rules of inheritance in case of protected and private derivations with suitable examples. 8

Unit II

4. (a) Define polymorphism and explain its types with suitable example. 8

(b) What is a virtual function? How is it different from pure virtual function? Why is it used in C++? 8

5. (a) Differentiate between pure virtual function and an abstract class by suitable example. 8

(b) Write a C++ program to show the conversion between objects of different classes. 8

Unit III

6. (a) What do you mean Template Function? Explain using a simple example. 8

(b) What is Template Class? How do you inherit from a class Template? Explain using example. 8