Roll No. ....

Total Pages : 03

BCA/M-17   1902

ADVANCED PROGRAMMING USING C++
BCA-242

Time : Three Hours]   [Maximum Marks : 80

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

1. Compulsory Question :
    (i)   Define Class.
    (ii)   What is the use of inheritance ?
    (iii)   Write examples of user defined data types.
    (iv)   Define tokens.
    (v)   What do you mean by modular approach in programming ?
    (vi)   What is Operator ?
    (vii)   What is the use of new operator ?
    (viii) What is a Function ?   8×2=16

Unit I

2. (a) What do you mean by polymorphism ? Explain the concept of dynamic polymorphism with suitable examples.
    (b) What is a destructor ? Explain Virtual Destructor.
                                                  2×8=16

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3. (a) What do you mean by abstract class ? How can an abstract class be defined ?
    (b) What do you understand by virtual derivation ?
                                                  2×8=16

Unit II

4. (a) What is a conversion function ? How is it created ? Explain its syntax.
    (b) What do you mean by automatic type conversion ? What is basic type conversion ?   2×8=16

5. For which data type the compiler of C++ does not support automatic type conversion ? What is the solution to perform these types of conversions ? Explain conversion from basic type to class type and class type to basic type.
                                                  1×16=16

Unit III

6. (a) What do you understand by Inheritance ? Write a program in C++ to implement hierarchical inheritance.
    (b) What is generic programming ? How is it implemented in C++ ?   2×8=16

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7. (a) Distinguish between the class and template with examples.

(b) What is a function template ? Explain with the help of syntax and example. 2×8=16

Unit IV

8. (a) Distinguish between the terms class template and template class with examples.

(b) What is an exception ? How many types of exception are there ? What type of exception can be handled by C++ compiler ? Explain. 2×8=16

9. (a) Describe the various approaches with suitable examples by which we can detect the end of file condition successfully.

(b) What is the difference between text file and a binary file ? Explain. 2×8=16