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**

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**

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