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BCA/M-18 1917

ADVANCED PROGRAMMING USING C++

BCA-242

Time : Three Hours] [Maximum Marks : 80

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

1. Compulsory Question : **8×2=16**

(i) What is the use of an object ?

(ii) What is Single Inheritance ?

(iii) Write examples of derived data types.

(iv) What is an Expression ?

(v) What do you mean by Module ?

(vi) What is a Unary Operator ?

(vii) What is the use of delete operator ?

(viii) What is a data type ?

Unit I

2. (a) What is the use of polymorphism feature in C++ ? Explain the concept of virtual function with of suitable program.

(b) What is a destructor ? Is it necessary to use destructor in a class ? Explain. **2×8=16**

3. (a) What is the use of pure virtual function ? Explain the concept of virtual function with example.

(b) How a virtual destructor can be define ? **2×8=16**

Unit II

4. (a) What do you mean by conversion ? Why do we need it ? How can we convert data from one form to another ?

(b) What do you understand by conversion between object between different classes ? Explain with the help of syntax and examples. **2×8=16**

5. What do you mean by private, protected and public data members and member functions ? Explain all the private, protected and public class derivation rules for data members and member functions with suitable diagram. **1×16=16**

Unit III

6. (a) What is the use of inheritance in C++ ? Write a program in C++ to implement multiple inheritance.

(b) What do you mean by robust features of C++ ? How is it implemented ? **2×8=16**

7. (a) What is the role of constructor and destructor in inheritance ? Explain with example.

(b) What is the use of function template in C++ ? Explain with the help of syntax and example.

2×8=16

Unit IV

8. (a) What are inputs and output streams ? Describe the various classes available for file operations.

(b) What is an exception ? How we can catch and throw an exception ? Write a program to catch and throw an exception of a number divided by zero.

2×8=16

9. (a) What are the limitations of a text file ? What is the solutions of these limitations ?

(b) What are the different operations that can be performed on a file ? Explain. 2×8=16