THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/ TECHNOLOGY — OCTOBER, 2016

OBJECT ORIENTED PROGRAMMING THROUGH C++

(Common for CT and CM)

[*Time* : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer the following questions in one or two sentences. Each question carries 2 marks.

  1. List the methods to include comments in a C++ program.

  2. Give an example for a homogeneous aggregate in C++.

  3. Write the declaration for a function called foo () that takes one argument of type float and returns type float.

  4. List the visibility controls.

  5. Specify two memory management operators.   (5×2=10)

PART—B

(Maximum marks : 30)

II Answer *any five* of the following questions. Each question carries 6 marks.

  1. Explain the stream classes for disk I/O operation.

  2. Predict the output of the following program segment.

```
int a = 10,  b = 14,  c = 67;
cout << (a>b || (a>c) << endl ;
cout << (a = = b & & b<c) << endl ;
cout << (a + +) << endl ;
```

  3. Explain about inline functions.

  4. Describe constructors.

  5. Explain access specifiers in C++.

  6. Write about base class and derived class with an example.

  7. Describe pure virtual functions.   (5×6=30)

Marks

PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT—I

III   (a)   Explain how strings represented in C++. Explain about finding the length of string.   9

    (b)   Compare while and do-while loops.   6

OR

IV   (a)   Develop a program to store and display the name, sex and age of employees in a company.   9

    (b)   List the primitive data types in C++.   6

UNIT—II

V   (a)   Explain the features of object oriented programming.   9

    (b)   With help of an example illustrate the use of static member variables in a class.   6

OR

VI   (a)   Explain function overloading with example.   9

    (b)   Outline the difference between passing parameter to a function by reference and by pointer.   6

UNIT—III

VII   (a)   With an example program illustrate single and multi level inheritance.   9

    (b)   Outline the limitations of operator overloading.   6

OR

VIII   (a)   Explain friend function with example.   9

    (b)   Describe about derived class constructors.   6

UNIT—IV

IX   (a)   Illustrate the sequence of events when an exception occurs.   9

    (b)   Differentiate between function template and function overloading.   6

OR

X   (a)   Explain multiple inheritance with an example.   9

    (b)   Explain the need of type cast operator with examples.   6

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