TED (15) – 3134 Reg. No. .....

(REVISION — 2015) Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2017

OBJECT ORIENTED PROGRAMMING THROUGH C++

[*Time* : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks

1. List primitive data types in C++.
2. Write the importance of main function.
3. Identify the feature that allows code reusability in object oriented programming.
4. List any two operators that cannot be overloaded.
5. Define exception. (5 × 2 = 10)

PART — B

(Maximum marks : 30)

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

1. Develop a program segment to generate even numbers between 100 and 200 using for statement. Modify it using while and do-while.
2. Describe about character arrays in C++.
3. Outline the structure of a class.
4. Describe data encapsulation and information hiding.
5. When is a friend function needed ? Give an example.
6. With the help of a program initialize base class members through a derived class constructor.
7. Explain multiple inheritance. (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) Describe the following :
(i) keyword (ii) identifier (iii) preprocessor directive 9

(b) Array is a homogeneous aggregate. Justify. 6

OR

IV (a) List bitwise, relational and logical operators. 9

(b) Explain structures in C++. 6

UNIT — II

V (a) Design a class point with member variables x and y. Write constructors to initialise the member variables to zero and to different values. Write a member function to display the x and y values. 9

(b) Differentiate between private and public access specifiers. 6

OR

VI (a) Demonstrate with C++ program for (i) passing objects to functions and (ii) returning objects. 9

(b) Explain function prototyping with an example. Specify its use. 6

UNIT — III

VII (a) Explain different types of inheritance with block diagram and an example for each. 9

(b) Explain about operator overloading using unary operator. 6

OR

VIII (a) Develop a class distance to represent distance in meters and centimeters. Write a program to find the sum of two distances using operator overloading. 9

(b) Explain about protected inheritance. 6

UNIT — IV

IX (a) Explain Template Class. State the need for Template Class. 9

(b) Explain virtual functions. 6

OR

X (a) Explain with an example how function templates are implemented. 9

(b) Differentiate compile time binding and run time binding. 6