TED (15) – 3134

(REVISION — 2015)

Reg. No.....

Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2019

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. Arrange the following operators in the order of precedence - *logical, assignment, relational, arithmetic, unary.*
2. State the main difference between an array and a structure.
3. List the methods to pass arguments to a function.
4. Define aggression in object oriented programming.
5. List any two type casts in C++. (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Outline the general structure of a C++ program. Write short notes on each components.
2. Explain storage class in C++.
3. Write a syntax of function prototype and function definition. Write a function that returns the smaller of two integer numbers passed as arguments. Write a program to find the smallest of two integers using the above function.
4. Differentiate between a class and an object with example.
5. Compare overloading and overriding.
6. Explain how the accessibility of class members can be controlled in a base class.
7. Explain the exception handling mechanism in C++. (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 for, while and do-while loops in C++. Write program segments to print numbers between 1 and 100 using for, while and do-while loops. 9

(b) List the steps in writing data to a file. 6

OR

IV (a) Define array. Describe the declaration, initialisation, accessing and manipulation of single and two dimensional arrays. 9

(b) Explain the built in data types in C++. 6

UNIT — II

V (a) Explain the features of object oriented programming. 10

(b) Using an example, demonstrate the concept of returning objects from a function. 5

OR

VI (a) Define a class **Time** that contain three member variable *hour, minute and second* and contains the member functions to perform following tasks.

- To initialise data members.
- Display time in Hour:minute:second format.
- To add two times.

Write a C++ program to illustrate the working of **Time** class. 10

(b) Illustrate constructor overloading with example. 5

UNIT — III

VII Explain Inheritance. Explain different type of Inheritance with examples. 15

OR

VIII (a) Explain friend function. 7

(b) What is operator overloading ? With the help of an example demonstrate the over loading of assignment operator. 8

UNIT — IV

IX (a) Explain virtual functions. 7

(b) Explain Multilevel Inheritance. 8

OR

X Write the syntax of template function and template class. Illustrate working. 15
