

TED (15) – 3134 (REVISION — 2015)

| Reg. No.  |  |
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## DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2018

## 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. Define enumerated datatype in C++
  - 2. Define default argument.
  - 3. What is the use of constructors in C++ classes?
  - 4. Discuss composition in C++
  - 5. Define multiple inheritance in C++

 $(5 \times 2 = 10)$ 

## PART -- B

(Maximum marks: 30)

- II Answer any five of the following questions. Each question carries 6 marks.
  - 1. Write a short note on the basic structure of a C++ program.
  - 2. Discuss structure as heterogeneous aggregate.
  - 3. Explain different parameter passing methods in C++
  - 4. What are the limitations of operator overloading?
  - 5. Explain multilevel inheritance with example
  - 6. Write a note on class templates in C++
  - 7. Discuss pure virtual functions in C++

 $(5 \times 6 = 30)$ 

6

9



III

IV

VI

VII

VIII

two strings.

(b) Explain virtual base class.

Marks PART — C (Maximum marks: 60) (Answer one full question from each unit. Each full question carries 15 marks.) UNIT - I (a) Define functions. What are the different types of functions in C++ 9 (b) Describe the concept of memory management in C++ 6 (a) Discuss with an example about recursion in C++ 9 (b) Write a program in C++ to find the sum of even numbers up to 'n'. 6 Unit - II Explain the basic concepts of Object Oriented Programming. 15 OR (a) Discuss inline functions with suitable example. 9 (b) Write a note on constructors in C++ 6 UNIT - III (a) Write a program in C++ to overload relational operator (==) to compare 9 (b) With the help of a sample program, explain hierarchical inheritance. 6 (a) With the help of an example, explain how to overload unary operator. 9

UNIT — IV

(a) Explain how the constructor of the base class can be invoked when the object IX of the derived class is created.

(b) What are the rules for using virtual functions?

(a) Explain multiple inheritance in C++ with an example program.

(b) Discuss how to use multiple catch statement for handling exception in C++