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TED (15) - 3134 (REVISION - 2015)

Reg. No.	
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.

 $(5 \times 2 = 10)$

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.

 $(5 \times 6 = 30)$

[P.T.O.



PART - C

(Maximum marks : 60)

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

Unit — I

III (a) I	Describe	the fol	llowing	-020
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(i) keyword	(ii) identifier	(iii)	preprocessor directive	9	
(b) Array is a homogeneous aggregate. Justify.						

OR

9 6

9

6

6

6

(b) Explain structures in C++.

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

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	
		C (1) into the functions and	

VI (a) Demonstrate with C++ program for (i) passing objects to functions and 9 (ii) returning objects. 6

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

UNIT - III

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

(b) Explain about operator overloading using unary operator.

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.

UNIT - IV

IX (a) Explain Template Class. State the need for Template Class. 9 6 (b) Explain virtual functions. OR 9

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

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

Marks