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BOARD DIPLOMA EXAMINATION, (C-20)

MAY—2023

DCME - FOURTH SEMESTER EXAMINATION

OOP THROUGH C++

Time : 3 Hours ]

[ Total Marks : 80

**PART—A**

3×10=30

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. List any three benefits of oops.
2. Write any three differences between C and C++.
3. Write the purpose of this keyword.
4. State the use of pointer object in C++.
5. Write the syntax of copy constructor in C++.
6. List any three operators which should not be overloaded in C++.
7. Define an inheritance.
8. Write the purpose of protected access specifier.
9. Write the purpose of cerr() and clog() streams in C++.
10. Define template in C++.

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**PART—B**

8×5=40

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **eight** marks.  
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

**11.** (a) Explain the basic concepts of oops.

**(OR)**

(b) write a C++ program to print big and small among n numbers using arrays.

**12.** (a) Explain the concept of function overloading in C++ with example.

**(OR)**

(b) Write a C++ program to perform dynamic memory allocation.

**13.** (a) Write a C++ program to print area of rectangle and square using constructor overloading.

**(OR)**

(b) Write a C++ program to overload unary-operator.

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**14.** (a) Explain single and multiple inheritances with an example.

**(OR)**

(b) Explain virtual base class concept in C++ with an example.

**15.** (a) Explain different types of templates in C++.

**(OR)**

(b) Write a C++ program queue operation using class templates.

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## PART—C

10×1=10

- Instructions :** (1) Answer the following question.  
(2) The question carries **ten** marks.  
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 16.** Is it possible to overload method and constructor in same class? If it is, justify the answer with an example.

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