# **BOARD DIPLOMA EXAMINATION, (C-20)**

## NOVEMBER/DECEMBER—2022

# DCME - FOURTH SEMESTER EXAMINATION

OOPS 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.
  - List the benefits of OOPs.
  - List different types of object oriented programming languages.
  - List the uses of Friend Function. 3.
  - What is the use of 'this' operator?
  - List the operators that can't be overloaded. 5.
  - Define operator overloading. 6.
  - Define base class and derived class.
  - Write the necessity of inheritance.
  - Write the I/O manipulators used in C++.
- Write the need for template. 10.

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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 the criteria for valuation are the content but not the length of the answer.
  - (a) Explain C++ operators with example program.

(OR)

(b) Explain Object Oriented paradigm.

(a) Explain inline function with C++ program.

(OR)

- (b) Explain the concept of returning objects from functions with C++ program.
- Write a C++ program for Binary Operator (+) overloading with 13. ordinary member function.

(OR)

- Define destructor. Write a C++ program using destructors.
- 14. (a) Write a C++ program to implement single inheritance.

(OR)

- (b) Explain the concept of virtual function using C++ program.
- (a) Write a simple C++ program to create classes based on templates. 15.

(OR)

(b) Write a C++ program for templates with single argument types.

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> PART-C 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.** How does C++ achieve compile time polymorphism?