



C20-CM-WD-404

**7437**

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

**OCTOBER/NOVEMBER—2023**

**DCME – FOURTH SEMESTER EXAMINATION**

OOP THROUGH C++

Time : 3 Hours ]

[ Total Marks : 80

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**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. Define 'Data abstraction' and 'Data encapsulation' in C++.
2. Define class and object.
3. Explain the concept of compile time polymorphism.
4. Explain the usage of comment statements in C++.
5. Define constructor and destructor.
6. List any three rules for overloading of operators.
7. List the different types of access specifiers available in C++.
8. Explain the relationship between base and derived classes.
9. Define manipulator in C++ and write the purpose of it.
10. State the need for templates in C++.

- 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 complete procedure of create, compile, link, load and execution of C++ program.

**(OR)**

- (b) Differentiate between procedure oriented and object oriented languages.

- 12.** (a) Explain the different parameter passing mechanisms with default arguments available in C++.

**(OR)**

- (b) Write a C++ program to illustrate the concept of passing objects to functions.

- 13.** (a) Explain the different types of constructors available in C++.

**(OR)**

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

- 14.** (a) Explain the concept of virtual function with an example.

**(OR)**

- (b) Explain multilevel and hybrid inheritances in detail.

- 15.** (a) Write a C++ program to perform stack operations using class templates.

**(OR)**

- (b) Write a C++ program to perform append operation over an existing file and print the updated data.

**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 friend() function in C++ will provide the security to the program, if it is give reasons and if not give reasons to justify your answer with an example.

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