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C20-CM-WD-404

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7437**BOARD DIPLOMA EXAMINATION, (C-20)****OCTOBER/NOVEMBER—2023****DCME – FOURTH SEMESTER EXAMINATION****OOP THROUGH C++****Time : 3 Hours]****[Total Marks : 80****PART—A** **$3 \times 10 = 30$** **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++.

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[Contd...

PART—B

8×5=40

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- 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

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- 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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