



C09-CM-404/C09-IT-404

**3461**

**BOARD DIPLOMA EXAMINATION, (C-09)**  
**MARCH/APRIL—2017**  
**DCM—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 class and object. Give example.
2. Write syntax for defining member function outside the class definition.
3. Write any two differences between class and structure.
4. What are the characteristics of friend function?
5. What are 'new' and 'delete' operators?
6. What is the relationship between base class and derived class?
7. List the types of access controls in inheritance.

- \* 8. What is the need for virtual functions in C++?
9. List file opening modes.
10. What is a class template and how is it declared?

**PART—B**

10×5=50

**Instructions** : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. (a) Write a C++ program using 'constructor' and 'destructor'. 5  
(b) Write a C++ program using inline functions. 5
12. (a) Explain how object can be passed to a function with a simple program. 5  
(b) Write a C++ program using a friend function that friend function should be friend of more than one class. 5
13. Explain the concept of function overloading. 10
14. Write a C++ program illustrating the use of array of objects. 10
15. Write a C++ program to implement multilevel inheritance. 10
16. Explain about virtual functions with the help of a program. 10
- \* 17. Explain I/O manipulators with examples. 10
18. Explain a class template for stack data structures with program. 10

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