



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**M.C.A. DEGREE EXAMINATION – COMPUTER APPLICATIONS**

**FIRST SEMESTER – APRIL 2017**

**16PCA1MC02- OBJECT ORIENTED PROGRAMMING THROUGH C++**

Date: 03-05-2017  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**PART – A**

**Answer all Questions:**

**10 x 2 = 20**

1. Mention the applications of OOPS.
2. What are the data types used in C++?
3. Define function. Mention its basic elements..
4. What is a pointer? State the use of & and \* operator.
5. What are abstract classes?
6. State the use of new and delete operators.
7. Mentions the functions for the manipulation of file pointers.
8. What are the basic tasks of error handling?
9. What are generic functions? Write the general form of template function definition.
10. State the uses of the keywords, typename and export.

**PART – B**

**Answer all Questions:**

**5 x 8 = 40**

- 11.a. Write short notes on the basic concepts of C++.  
(OR)
- b. Explain the various types of expressions used in C++ with examples.
- 12.a. "Friend function can access the private members of a class". Explain with an example.  
(OR)
- b. Illustrate the categories of function with example
- 13.a. "Ambiguity in multiple inheritance"-explain with an example.  
(OR)
- b. Illustrate virtual functions with an example

14.a.Explain different ways of opening a file with example.

**(OR)**

b. Write short notes on

i. terminate() and unexpected ().

ii. terminate and unexpected handler.

15.a. Illustrate the general process of swapping two values using generic functions.

**(OR)**

b. Explain the implementation of generic functions in sorting.

### **PART-C**

**Answer any TWO Questions:**

**2 X 20 = 40**

16.a. Explain the various types of operators with an example for each

b. Explain the following:

i. Features of constructors.

**( 3 marks)**

ii. Types of constructors

**( 7 marks)**

17.a. Explain the following:

i. Memory management functions.

ii. Types of inheritance.

b. Illustrate the following with examples:

i. try with multiple catch statements.

ii. catch all exceptions.

18.a. Explain the following with example

i. overloading function template.

**( 3 marks)**

ii. template class can have more than one generic data type.

**( 7 marks)**

b.Illustrate the following with examples:

i. pointers to arrays

ii. pointers to objects.

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