

**MCA-10/M.Sc.IT-10/MIT(CS)-103**

**Object-oriented programming Through C++/**

**Object-oriented programming Using C++**

Master of computer Application /

Master of science in information technology/

Master of science (Cyber Security)

(MCA/PDGCA/M.Sc.IT-11/12/16/MSCCS-18)

First Semester, Examination 2019

Time : 3 Hrs

Maximum Marks : 80

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**Note :** This paper is of Eighty (80) marks divided into three (03) sections A,B and C. Attempt the questions contained in these sections according to the detailed instructions given therein.

**Section –A**

**(Long Answer Type Questions)**

**Note :** Section ‘A’ contains four (04) long answer type questions of Nineteen (19) marks each. Learner are required to answer any two (02) questions only.  
(2 x 19 = 38)

1. Explain various types of loops used in C++ with suitable examples.
2. Define the following
  - (a) Data hiding and Encapsulation
  - (b) Static functions.
  - (c) Virtual destructor.

3. What is the use of constructor function in a class ? Give a suitable example.
4. Explain the difference between single and multiple inheritances with example.

## **Section – B**

### **(Short- answer- type questions)**

**Note :** Section 'B' contains eight (08) short answer type questions of Eight (08) marks each. Learner are required to answer any Four 04 questions only.

(4 x 8 =32)

1. What is friend function? Explain by giving suitable example.
2. What is the difference between nesting and inheritance?
3. What is the need of operator overloading? Explain with example.
4. What is an array? How it is declared and used in C++.
5. Why files are used in OOP?
6. What is class concept? Explain with suitable example.
7. Explain the importance of destructors.
8. What is difference between while and do-while loop?

## Section –C

### (Objective-type questions)

**Note :** Section 'C' contains ten (10) objective type questions of one (01) mark each. All questions of this section are compulsory. (10 x 1 = 10)

1. Which of the following type of class allows only one object of it to be created?
  - (a) Virtual class
  - (b) Abstract class
  - (c) Singleton class
  - (d) Friend class
2. Which of the following is not a type of constructor ?
  - (a) Copy constructor
  - (b) Friend constructor
  - (c) Default constructor
  - (d) Parameterized constructor
3. Which of the following term is used for a function defined inside a class?
  - (a) Member variable
  - (b) Member function
  - (c) Class function
  - (d) Classic function
4. Which of the following concept of oops allows compiler to insert arguments in a function call if it is not specified?
  - (a) Call by value
  - (b) Call by reference
  - (c) Default arguments
  - (d) Call by pointer
5. How many instances of an abstract class can be created?
  - (a) 1
  - (b) 5
  - (c) 13
  - (d) 0

6. Which of the following cannot be friend?
  - (a) Function
  - (b) Class
  - (c) Object
  - (d) Operator function
7. Which of the following concepts of OOPS means exposing only necessary information to client?
  - (a) Encapsulation
  - (b) Abstraction
  - (c) Data hiding
  - (d) Data binding
8. Which of the following approach is adapted by C++?
  - (a) Top-down
  - (b) Bottom-up
  - (c) Right-left
  - (d) Left-right
9. Which of the following is correct about function overloading ?
  - (a) The types of arguments are different.
  - (b) The order of argument is different
  - (c) The number of argument is same.
  - (d) Both A and B.
10. Which of the following statement is correct?
  - (a) a constructor is called at the time of declaration of an object.
  - (b) A constructor is called at the time of use of an object.
  - (c) A constructor is called at the time of declaration of a class.
  - (d) A constructor is called at the time of use of a class.

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