

Registration No :

--	--	--	--	--	--	--	--	--	--

Total Number of Pages : 01

**MCA
MCC203**

**2nd SEMESTER Back EXAMINATION 2017-18
OBJECT ORIENTED PROGRAMMING USING C++**

BRANCH : MCA

Time: 3 Hours

Max Marks: 70

Q.COD E : C815

Answer Question No.1 which is compulsory and any five from the rest.

The figures in the right hand margin indicate marks.

Answer all parts of a question at a place.

- Q1 Answer the following questions: (2 x 10)**
- a) What is abstract data type? Give an example.
 - b) What is Data hiding? How is it achieved in C++?
 - c) What is reference variable? Give an example.
 - d) What is destructor? Is it useful, Justify?
 - e) Write how does C++ allocate memory dynamically to an array of 10 integers?
 - f) What is p++, if p is a pointer?
 - g) What is the need of virtual base class in C++ ?
 - h) Write the usage of scope resolution operator in C++.
 - i) What is function overloading? Is it necessary?
 - j) What is meant by generic programming? Give an example.
- Q2**
- a) What are different looping structures used by C++? Write their respective advantages and disadvantages (if any). **(5)**
 - b) Discuss the parameter passing mechanisms pass by value, pass by address and pass by reference with example. **(5)**
- Q3**
- a) Define class and object. Write a program using class to find area and perimeter of a rectangle and display the result. **(5)**
 - b) What is copy constructor .Write a program using copy constructor to copy one object into another? **(5)**
- Q4** **(10)**
- Create a class MyArray which represents an array. Use constructors to create the array dynamically. Input the array elements, sort the array and display the sorted array.
- Q5**
- a) What is operator overloading? Write a C++ program to overload plus(+) operator to add two complex numbers and display the resultant number. **(5)**
 - b) Discuss multiple and multi level inheritance with suitable programming example. **(5)**
- Q6** **(10)**
- What is polymorphism? How does C++ achieve polymorphism? Explain this with proper programming examples.
- Q7**
- a) What is exception? Write a C++ program to handle divide –by-zero exception. **(5)**
 - b) What are the two methods of opening a file, explain with example? What is the difference between these two methods? **(5)**
- Q8** **(5 x 2)**
- Write short notes on any TWO (Give examples)**
- a) Ambiguities in inheritance
 - b) this pointer
 - c) Composition
 - d) RTTI