

USN

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

CMRIT LIBRARY
BANGALORE - 560 037

10EE664

Sixth Semester B.E. Degree Examination, June/July 2018
Object Oriented Programming with C++

Time: 3 hrs.

Max. Marks:100

Note: Answer FIVE full questions, selecting atleast TWO questions from each part.

PART – A

- 1 a. What is object oriented programming (OOPs)? And mention its advantages. (06 Marks)
b. Explain :
i) Data abstraction and encapsulation
ii) Polymorphism with examples. (08 Marks)
c. What is structure and how is different from “class”. Create a structure called author of a book and the data members of it are “Name”, “Title” and “price” of the book. (06 Marks)
- 2 a. Define the data types associated with C++. Give examples for each. (08 Marks)
b. What is scope resolution operator and explain its importance. (06 Marks)
c. Explain with examples : i) type conversion ii) constants iii) pointer. (06 Marks)
- 3 a. What is inline function? Mention its limitations. (06 Marks)
b. What are default arguments to a function and validate with suitable function prototypes. (05 Marks)
c. What is function overloading? Write a C++ program to calculate area of the following :
i) circle ii) rectangle iii) triangle with 3 different sides. Use “Area()” as function overloading. (09 Marks)
- 4 a. Explain all the access specifiers in C++. (06 Marks)
b. Define static data members and static member functions with suitable example. (04 Marks)
c. Write a C++ program to add two distances specified in feet and inches, using the following concepts.
i) Use class name as “DISTANCE”
ii) Define a constructor
iii) Add the distances with objects as arguments and reruns an object
iv) Display function, to display the result. (10 Marks)

PART – B

- 5 a. What are friend functions? Write a program to swap the data between two different classes. (08 Marks)
b. What is operator over loading? Mention the rules to be followed for operator overloading in C++. (06 Marks)
c. Write a C++ program to add two complex numbers using “+” operator. (06 Marks)

1 of 2

CMRIT LIBRARY
BANGALORE - 560 037

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

- 6 a. Explain the various types of inheritance in C++ with examples. (08 Marks)
b. Explain the order of constructor execution in an inheritance in OOPs. (06 Marks)
c. List out the operators, which cannot be overloaded. (06 Marks)
- 7 a. What are virtual functions? Explain how runtime polymorphism is implemented by using virtual functions. Explain with examples. (10 Marks)
b. What is a stream? Give stream class hierarchy. (05 Marks)
c. What is "this" pointer? Explain its significance. (05 Marks)
- 8 Write a short notes . (20 Marks)
a. Input and output streams in C++
b. Dynamic memory allocation in C++
c. Copy constructor
d. Abstract class.
