U.S.N.

BMS College of Engineering, Bangalore-560019

(Autonomous Institute, Affiliated to VTU, Belgaum)

December 2016 Semester End Main Examinations

Course: Programming with C++   Duration: **3 hrs**
Course Code: 16CI3GCPCP   Max Marks: **100**

Date: 17.12.2016

Instructions: **1.Answer any five full questions choosing one from each unit.**
         2. Assume missing data (if any) suitably

UNIT 1

1	a)	What is the object oriented programming? Discuss the characteristics of an object oriented system	10
	b)	Explain the advantages of the following with examples i) Friend functions ii) Inline functions	(5+5)

UNIT 2

2	a)	Explain function overloading? Illustrate function overloading through add functions in which addition of two integers and addition of two floats is to be considered	10
	b)	Explain the need for operator overloading. Write a program to overload "+" operator.	10

UNIT 3

3	a)	Explain the visibility of the base class members, for the access specifiers: private, protected and public while creating the derived classes	10
	b)	Write a C++ program to initialize base class members through a derived class constructor.	10

OR

4	a)	Explain with example programs virtual and pure virtual functions.	10
	b)	In inheritance explain the order of invocation of constructors and destructors with an example program.	10

UNIT 4

5	a)	What is a generic function? Write a program using function template to sort int and float array.	10
	b)	What is exception handing? Explain try, throw and catch constructs in C++.	10

UNIT 5

6	a)	What is a stream? What are the various flags and functions associated with error handling of streams in C++?	10
	b)	Explain any four template classes of Standard Template Library (STL).	10

OR

7 **a)** Explain the following functions: 10

                i)   seekp() tellp()

                ii)   setw()   setprecision()

    b) Draw the hierarchy of handling streams in C++. Write a C++ program to read the   10
contents of a file and display the same.

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