P13CS35 Page No... 1

U.S.N					



## P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

## Third Semester, B.E. - Computer Science and Engineering Make-up Examination; Jan/Feb - 2017 Object Oriented Programming with C++

Time: 3 hrs Max. Marks: 100

Note: Answer FIVE full questions, selecting ONE full question from each unit.

	UNIT - I							
1 a.	State the important features of object oriented programming. Compare the object oriented	8						
	system with procedure oriented system.							
b.	What is function overloading? Illustrate functions overloading through add function which							
	adds two integers and two floating point numbers.	6						
c.	Explain the working of inline function with an example.							
2 a.	What is a friend class? Illustrate friend as bridges.	10						
b.	Explain:	5						
	i) this operator ii) arrow operator.	3						
c.	Write a note on Name space.	5						
	UNIT - II							
3 a.	What is a constructor? Explain different types of constructor.	10						
b.	Explain new and delete operator used in dynamic memory allocation.							
4 a.	a. List the limitation of overloading unary operator, also explain the rules to overload binary							
	operator.	10						
b.	Write a program to overload post increment and pre increment operator.	10						
	UNIT - III							
5 a.	Define a template. Implement stack using function templates.							
b.	Differentiate between:	8						
	i) Lists and Vectors ii) Sets and Maps.	0						
6 a.	What do you mean by exception? How it is handled in C++? Explain with suitable example.	10						
b.	Write a program to sort given array using class template.	10						
	UNIT - IV							
7 a.	What is inheritance? Explain the different types of inheritance possible in C++.	10						
b.	Write a C++ program to create a class STUDENT with data members - USN, NAME and							
	AGE. Using inheritance create class UGSTUDENT having fields SEM, FEES and	10						
	STIPEND. Enter data for 5 student and compute the average age for 5 UG students.							

Page No... 2 P13CS35 With a suitable example, illustrate how base class member function can be invoked in a 10 derived class, if the derived class also has a member function with the same name. b. What are differences between inheriting a class with public and private mode. Give a 10 sutiable example. UNIT - V What is a virtual function? Explain with a example. 10 9 a. b. Write a short note on: i) I/O stream classes with hierarchy for C++ stream 10 ii) Fromatted I/O. 10 a. Differentiate between early and late binding by giving an example to each. 10 b. Describe the rules to be satisfied while creating virtual functions. 10

\* \* \*