U.S.N ☐☐☐☐☐☐☐☐☐☐

P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
Second Semester, Master of Computer Applications (MCA)
Semester End Examination; June - 2017
Object Oriented Programming Using C++

Time: 3 hrs   *Max. Marks: 100*

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

UNIT - I

1 a.	What is the object oriented programming? Discuss the characteristics of an object oriented system.	10
b.	What are qualifiers? Illustrate them with example.	5
c.	Write a C++ program to check the youngest and eldest Person's age.	5
2 a.	What are default arguments? Explain with an example.	6
b.	What are inline functions? Discuss the advantages of inline functions.	4
c.	What is function overloading? Explain function overloading with an example program.	10

UNIT - II

3 a.	Explain static data members and static member functions of a class.	10
b.	What are the different types of access specifiers supported by C++? Explain with suitable example.	10
4 a.	Can constructor be overloaded? Give a supportive illustration.	10
b.	Explain default and copy constructor with example program.	10

UNIT - III

5 a.	What are the friend functions and friend classes? Write a C++ program to exchange two private data members of two different classes, using non-member function.	10
b.	Write the merits and demerits of using friend functions.	10
6 a.	What are class templates? How are they created? Create a template for vector multiplication.	10
b.	Write C++ program to overload binary + operator using member function.	10

UNIT - IV

7 a.	What are the different modes of inheritance supported by C++? Explain them with an example.	10
b.	Illustrate with an example program, how to pass arguments to base class constructor.	10
8 a.	Define early binding and late binding. Explain with example.	10
b.	What is virtual function? Explain with simple program.	10

UNIT - V

9 a. What are the I/O streams? Give the stream class hierarchy. 10

  b. With an example and syntax, explain different manipulators. 10

10 a. How the opening and closing of files handled in C++? Distinguish between text and binary files. 10

  b. What do you mean by Exception handling? List the different exception handling options. Explain how do you rethrow an exception with a suitable example? 10

∗ ∗ ∗ ∗