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P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belgaum)
Third Semester - Master of Computer Applications (MCA)
Semester End Examination; Dec. - 2015
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.	Differentiate structured oriented and object oriented paradigm.	10
b.	Write general structure of C++ program with an example.	6
c.	Write different data types of C++.	4
2 a.	List different parameter passing techniques. Illustrate parameter passing techniques with C++ program.	10
b.	Define function overloading. Give an example program.	10

UNIT - II

3 a.	Explain static data members and static member function.	10
b.	Explain two ways of using scope resolution operator. Give an example.	10
4 a.	Define constructors. With an example, explain constructor overloading.	10
b.	Define destructor. Write the characteristics of destructor. Give an example.	10

UNIT - III

5 a.	Write the characteristics of a friend function. Give an example.	8
b.	List five rules of operator overloading. Write C++ program to overload the binary operator +.	12
6 a.	Write a C++ program to overload the operator ++.	10
b.	Write a C++ program to create a template function for bubble sort using integers and double data type.	10

UNIT - IV

7 a.	Define Inheritance. With neat diagram, explain different forms of inheritance.	10
b.	Write a note on : i) Virtual functions ii) Granting Access.	10
8 a.	Write a C++ program to pass parameter to base class constructor through derived class.	10
b.	How virtual functions are made hierarchical? Give an example.	10

UNIT - V

9 a.	What are iostream? With neat diagram explain stream class hierarchy.	10
b.	With example program, explain how to overload insertion and extraction operator.	10
10 a.	How exception handling is done in C++? Give an example.	10
b.	Write a note on : i) Containers ii) Vectors iii) Lists iv) Maps	10

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