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**B.E./B.Tech. (Full-Time) DEGREE END SEMESTER EXAMINATIONS
(April 2014)
ELECTRICAL AND ELECTRONICS ENGINEERING BRANCH**

**Second Semester
EE 9152 - Object Oriented Programming in C++
[Regulation 2008]**

Time: 3 Hrs.

Max. Marks: 100

Answer ALL Questions

PART - A [10 x 2 = 20]

1. What are the advantages of function prototypes in C++?
2. Give the syntax of while loop in C++.
3. What are data members and member functions?
4. How a class member that is to be shared among all objects of a class is called?
5. What do you mean by constructors?
6. Give two real life examples for multilevel inheritance.
7. What do you mean by inheritance in C++?
8. Describe the syntax of multilevel inheritance.
9. What is the need of virtual functions?
10. What do you mean by function overloading?

PART - B [5 x 16 = 80]

11. i) Explain how error handling in C++ is done using try/throw/catch constructs [12]
ii) What are the limitations of the same. [4]
 12. a) i) Write a note on terms and concepts related object oriented programming. [8]
ii) How it differs from procedural programming. [4]
iii) Explain the merits and demerits of the same. [4]
- Or**
- b) i) List the operators available in C++. Give the precedence rules for all the operators available in C++. [8]
ii) Explain the syntax of for loop in C++ with a very simple example. [8]
13. a) It will be convenient to store time as two numbers, representing hour and minute. Create a class for storing time and overload the + operator to add two time instances and less than (<) operator to compare them. [16]
- Or**
- b) Write a detailed note on standard template library and function templates. [16]
14. a) Write a class to represent a vector (a series of float values). Include member functions to perform the following tasks: a) To create the vector, b) to modify the value of the given element, c) To multiply by a scalar value and d) to display the vector. Write a program to test your class. [16]
- Or**
- b) Write short notes on:
 - i) Dynamic memory allocation and deallocation [8]
 - ii) Constructors and Destructors. [8]

P.T.O

15. a] Assume that a bank maintains two kinds of accounts for customers, one called as saving account and the other as current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. Create a class *account* that stores customer name, account number and type of account. From this derive the *current_account* and *savings_account* classes to make them more specific to their requirements. Include necessary member functions in order to achieve the following tasks. a) Accept deposit from a customer and update balance, b) Permit withdrawal and update balance, and c) compute interest. [16]

Or

- b] List and explain the types of inheritance with suitable example programs. [16]

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