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**B.E/B.TECH DEGREE EXAMINATIONS, APRIL/MAY 2012**

**SIXTH SEMESTER**

**ELECTRONICS AND COMMUNICATION ENGINEERING**

**EC502 OBJECT ORIENTED PROGRAMMING**

Regulation 2004

Time: 3 hours

Maximum Marks: 100

Answer ALL questions

**PART A – (10 x 2 = 20 marks)**

1. Compare and Contrast “class” and “object”.
2. What are the difference between Arrays and Pointers
3. What is the necessity for defining a Constructor
4. What is the use of Static members in a class?
5. What do you meant by Polymorphism?
6. List out the operators that cannot be overloaded.
7. What is the advantage of using templates in C++ program.
8. Write a function template that takes two different data types as an argument
9. What is the necessity for protected access modifier in inheritance?
10. List few factors that can be considered as exception in C++?

**PART B – (5 x 16 = 80 marks)**

11. (i) Describe the important features of Object Oriented Program in detail. (8)
- (ii) With an example program, explain how C++ supports encapsulation and data abstraction. (8)

12 a What is *this pointer*? Comment on “delete *this*”. Write a program to demonstrate the use of *this pointer*.

(OR)

12 b. Write a C++ program to perform the addition of  $P_i + Q_j$  and  $R_i + S_j$

13 a. Explain the importance of operator overloading by using an example program.

(OR)

13 b. Write a program to overload unary operator for processing counters. It should support both upward and downward counting. It must also support operator for adding two counters and storing the result in another counter.

14 a. Write the template implementation of a List, which allows accessing and retrieving of any type of data.

(OR)

14 b. Design a class template for "FIFO" data structure with necessary data members and member functions. Using this template, perform some simple operations on user-defined object.

15 a (i) Discuss the mechanism used in handling exceptions and give the syntax for try...catch and throw constructs. (8)

(ii). Write a C++ program to demonstrate how multiple exceptions can be thrown. (8)

(OR)

15. (b) What do you mean by inherited, overloaded and Overridden and also discuss the different forms and levels of Inheritance with an example program

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