

**B.E./B.TECH (FULL-TIME) DEGREE EXAMINATIONS, APRIL/MAY 2012**

**ELECTRICAL AND ENGINEERING**

**SECOND SEMESTER**

**REGULATION 2008**

**EE9152 Object Oriented Programming**

**Time : 3 Hours**

**Max:100 Marks**

**Answer All Questions**

**Part –A**

**10 x 2 = 20 Marks**

1. Define Encapsulation.
2. Why are structures used?
3. What is 'this' pointer?
4. Why do we need static data member and write the syntax to define a static data member?
5. What are the characteristics of constructors?
6. What is the role of 'protected' access specifiers in inheritance?
7. What is meant by compile time polymorphism?
8. Define virtual functions.
9. List out the operators that can be overloaded.
10. Compare Early binding and Late binding.

**Part – B**

**5 x 16 = 80 Marks**

11. With suitable example program, explain the concept of exception handling mechanism. (16)
  12. a) (i) Write a C++ program to swap two numbers by using function call by reference. (8)  
(ii) Discuss briefly about the data types supported by C++. (8)
- (OR)
- b) (i) What is object oriented programming? Explain how it differs from procedure oriented language. (8)  
(ii) Explain enumerated data types and also explain the use of enumerated constants. (8)
13. (a) Write a C++ program defining class-student, having register number and names as members and another class –result derived from student and with marks in three subjects as its members. The program must accept data at run time and display the results along with the percentage of marks. (16)
- (OR)
- (b) (i) Explain how *new* and *delete* operators manage the memory allocation dynamically. (8)  
(ii) Explain the concept of constructor and destructor with suitable example. (8)

14. (a) What is inheritance? What are the different types of inheritance supported by C++ and explain them with examples. (16)

(OR)

(b) Write short notes on the following:

(i) Polymorphism

(ii) Friend function

(8+8)

15. (a) (i) Explain the overloading of the output operator (<<) with examples. (8)

(ii) Write a program to multiply two complex numbers by overloading \* operator. (8)

(OR)

(b) Explain the concept of Function and class templates with example. (16)