

**Punjab Technical University M.C.A Computer Applications 2007**

OBJECT ORIENTED ANALYSIS AND DESIGN  
(ELECTIVE-1)

MCA(Sem-4th)

Time : 03 Hours

Maximum Marks : 60

PAPER ID [MC003]

**Instructions to the candidates:**

- 1) Attempt any one question from each sections A,B,C& D.
- 2) Section E is compulsory.

**Section-A**

**Q1) Write short notes on following:-**

- a) Multiple Inheritance
- b) Implicit subtyping versus Explicit Inheritance.

**Q2) Explain method overriding with a suitable example. (10\*1=10)**

**Section-B**

**Q3) Explain operator overloading of binary operator with a suitable example.**

**Q4) What is meant by classes within the class? How can we declare a class and object? Explain with the help of example. (10\*1=10)**

**Section-C**

**Q5) Discuss in detail object oriented development.**

**Q6) What is a template? How are they created? Explain with the help of example (10\*1=10)**

#### **Section-D**

**Q7) Prepare a detailed object diagram for a participant's registration system for a seminar. Also give appropriate justification for the object diagram.**

**Q8) Discuss a relationship between various models. (10\*1=10)**

#### **Section-E**

**Q9)**

- a) What do you understand by an abstract data type?**
- b) How is message passing in object oriented languages?**
- c) Differentiate between a normal function and a macro.**
- d) What is encapsulation?**
- e) What are friend function?**
- f) What is the difference between public and private derivation?**
- g) How are libraries designed?**
- h) What is object design?**
- i) What is need modeling?**
- j) What is entity relationship modeling? (10\*2=20)**

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