ROLL NO : 

Total number of pages:[2]

Total number of questions: 06

B-Tech. CSE/ 8ᵗʰ Sem

# Object Oriented Analysis and Design

Subject Code: BTCS-906

Paper ID: _____

Time allowed: 3 Hrs

Max Marks: 60

**Important Instructions:**
- All questions are compulsory
- Assume any missing data

## Part-A (2×10)

Q1) Answer in brief:
(a) What is the use of CASE tools?
(b) Differentiate Pattern from framework?
(c) How to create a Domain Model?
(d) Define Object oriented metrics?
(e) What is the relationship between Coupling and Cohesion?
(f) Define Iterator Pattern?
(g) Why Unified approach is needed? List its Components?
(h) What are various components used in Deployment Diagram?
(i) What is Meta Data? How it is represented in UML?
(j) Explain the use of Package Diagram?

## Part-B (8×5)

Q2) How does the object oriented approach differ from traditional approach? Why is reusability important? How does Object-oriented Software development promote and improve reusability? (CO1)

OR

Briefly explain following characteristics and themes of Object oriented systems?
Classifications,Identity,Inheritance,Polymorphism,Encapsulation,Messege sending and Aggregation (CO1)

1

**Q3)** Explain Use Case Modeling and decomposition of use cases with the help of Bus Seat Reservation System by considering the following tasks?
   1. Record Booking   2. Cancel Booking   3. Record Arrival
   4. Change Booking   5. Ticket Payment                                    (CO2)

**OR**

Draw the use-case diagram for Hotel Information System. There are two

types of customers: Tour-group customers and Individual customers. Both

can book, cancel, check-in and check-out of a room by Phone or via the

Internet. There are booking process clerk and reception staff who manages

it. A customer can pay his bill by credit card or pay utility bill.        (CO2)

**Q4)** What are the similarities/dissimilarities between a sequence diagram and

Collaboration diagram? Draw the Interaction diagram for an ATM – used for

card based banking system.?                                                (CO3)

**OR**

Draw State Machine Diagram for Online Railway Ticket Reservation
System?                                                                    (CO3)

**Q5)** What is the role of Patterns in OOAD? Explain the use of following Patterns with the help of suitable examples?
   1. Proxy Pattern.
   2. Facade Pattern.
   3. Singleton Pattern.
   4. GRASP Pattern
                                                                           (CO4)

**OR**

What is the use of Anti Pattern? Should a Pattern or Anti pattern be analyzed? Explain various advantages, disadvantages and various responsibilities assigned to Anti Pattern?

                                                                           (CO4)

**Q6)** What is the use of Domain Modeling in OOAD? Discuss the Aspect-oriented

software modeling with the help of block diagram?                         (CO5)

**OR**

Compare any two Object oriented languages? Differentiate between Cluster testing and System level testing of Object-oriented programs?          (CO5)