

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
CS6502-OBJECT ORIENTED ANALYSIS AND DESIGN**

**UNIT V
CODING AND TESTING**

Mapping design to code – Testing: Issues in OO Testing – Class Testing – OO Integration Testing – GUI Testing – OO System Testing.

PART A

1. What are Steps for Mapping Designs to Code?

Implementation in an object-oriented programming language requires writing source code for:

- Class and interface definitions
- Method definitions

2. What is testing?

Testing is a continuous activity during software development. In object-oriented systems, testing encompasses three levels, namely, unit testing, subsystem testing, and system testing.

3. Write the issues in OO testing

Testing in an OO context must address the basics of testing a base class and the code that uses the base class. Factors that affect this testing are inheritance and dynamic binding.

4. What is class testing?

In class testing, the individual classes are tested. It is seen whether the class attributes are implemented as per design and whether the methods and the interfaces are error-free. Unit testing is the responsibility of the application engineer who implements the structure.

5. What is OO integration testing?

Like many others, the term integration testing has diversified meanings. Our definition of integration testing resembles closely to the one given by Beizer [1990]. Integration testing is the testing performed to catch any errors when two or more individually developed components are aggregated to execute their functionalities. A careful reader will notice that this is different than system testing, which we call as integrated system testing

6. What is GUI testing?

User interface testing, a testing technique used to identify the presence of defects is a product/software under test by using Graphical user interface [GUI]. GUI Testing - Characteristics:

- GUI is a hierarchical, graphical front end to the application, contains graphical objects with a set of properties.
- During execution, the values of the properties of each objects of a GUI define the GUI state.
- It has capabilities to exercise GUI events like key press/mouse click.
- Able to provide inputs to the GUI Objects.

- To check the GUI representations to see if they are consistent with the expected ones.
- It strongly depends on the used technology.

7. What is OO system testing?

Testing is a continuous activity during software development. In object-oriented systems, testing encompasses three levels, namely, unit testing, subsystem testing, and system testing.

PART B

1. Explain the operation of Mapping Designs to Code. **APRIL/MAY-2011**

- Programming and the Development Process
- Mapping Designs to Code
- Creating Class Definitions from DCDs
- Creating Methods from Interaction Diagrams
- Container/Collection Classes in Code
- Exceptions and Error Handling
- Defining the Sale--makeLineItem Method
- Order of Implementation
- Test-First Programming

2. Discuss briefly about Issues in OO Testing.

3. Write short notes on Class Testing.

4. Explain in detail about the OO Integration testing.

5. Explain in detail about GUI testing.

6. Write short notes on OO System testing.

7. Explain in detail about coding and testing in OOAD.

8. Explain in detail about mapping design to code concepts in detail.

9. Comparison between OO integration testing and OO system testing.

10. Explain in detail about the different types of testing in OOAD.

11. Comparison between GUI testing and class testing.