



Avinashilingam Institute for Home Science and Higher Education for Women  
Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD [now MoE]  
Re-accredited with an 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC  
Coimbatore - 641 043, Tamil Nadu, India

**Continuous Internal Assessment – II – April 2025**  
**II Semester**

**Class: I Year**  
**Branch: MBA IT & Systems Management**

**Time: 2 Hours**  
**Max. Marks: 60**

**24MBMC15 - Systems Analysis and Design**

Course Outcomes:

1. Understand and apply various software development life cycle models and methodologies.
2. Analyze and document system requirements using structured representation techniques.
3. Design and test software systems using appropriate design methods and testing strategies.
4. Apply object-oriented modelling techniques using UML for system development.
5. Design and develop effective user interfaces and system components using object-oriented methods.

**PART A - 6 x 1 = 6**

**Choose the Correct Answer**

1. Which technique is used to evaluate boundary values in software testing?  
a) Black Box Testing b) White Box Testing c) Boundary Value Analysis  
d) Equivalence Partitioning CO3K1
2. Which UML diagram represents interactions between objects?  
a) Class Diagram b) Sequence Diagram  
c) Use Case Diagram d) Package Diagram CO4K1
3. Which type of testing is done without executing the program?  
a) Static Testing b) Dynamic Testing  
c) System Testing d) Acceptance Testing CO3K1
4. Which design technique emphasizes minimal interdependence between modules?  
a) Coupling b) Cohesion c) Normalization d) Aggregation CO3K1
5. Which UML diagram is used to represent the dynamic behavior of the system?  
a) State Chart Diagram b) Activity Diagram  
c) Class Diagram d) Component Diagram CO4K1
6. Which testing method validates if the developed software meets customer requirements?  
a) Unit Testing b) Regression Testing  
c) Acceptance Testing d) Integration Testing CO3K1

**PART B - 3 x 6 = 18**

**Answer ALL questions Each answer should not exceed 400 words or two pages**

- 7.a. Explain Coupling and Cohesion with examples. CO3K2  
Or
- 7.b. Describe the purpose and benefits of Normalization. CO3K2
- 8.a. List and explain the steps in Black Box Testing. CO3K2  
Or
- 8.b. Write short notes on Unit Testing and Integration Testing. CO3K2
- 9.a. Explain the principles of Object-Oriented Design. CO4K2  
Or
- 9.b. List and describe different types of UML diagrams. CO4K2

**PART C - 3 x 12 = 36**

**Answer ALL questions Each answer should not exceed 800 words or four pages**

- 10.a. Explain Structured Chart and Module Hierarchy. CO3K3  
Or  
10.b. Describe Static Testing, Dynamic Testing, and Black Box Testing. CO3K3
- 11.a. Explain Object-Oriented Methodology with examples. CO4K4  
Or  
11.b. Write short notes on Use Case Diagram, Sequence Diagram, and Collaboration Diagram. CO4K4
12. Case Study: Design a library management system using Object-Oriented Design principles. CO5K5

Prepared by: Dr. D. Arthi

No: of copies required: 55