

Dr. Babasaheb Ambedkar Open University
Term End Examination February – 2026

Course	: PGDCA	Date	: 16-Feb-26
Subject Code	: PGDCA-204	Time	: 03:00pm to 05:15pm
Subject Name	: Object Oriented Analysis and Design	Duration	: 02.15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. Write short note on metadata.
2. What is multiple inheritance. Explain in detail with the help of an example.
3. What are the benefits of OOA technology?
4. Write short notes on classes involved in dynamic modeling?
5. Explain about UML?

Section B

Answer the following (Attempt any four) (20)

1. Write short note on Abstract classes
2. Explain the concept of Behavioral Diagrams?
3. Differentiate between object oriented decomposition and structured decomposition?
4. Write short note on Concurrency?
5. Define the steps used in constructing Functional Model?
6. What are the advantages and drawbacks of Data flow diagram?

Section C

Part – A (Multiple Choice Questions) (10)

1. What is object oriented modeling strategy?
A Use of algorithms B Use of objects
C Use of classes D Both B and C
2. What can constitute constraints?
A Numeric data B Geometric relationship
C Both of these D None of these
3. Select the correct option if class A is inherited by class B.
A class B + class A B class B extends A
C class B inherits class A D class B extends class A
4. What is Iteration?
A Repetition of design process B Reusability
C Re-examine the model to remove D All of these
inconsistencies
5. What is the need of using boundary conditions?
A It describes normal operations like B It describes how the system is
start-up, shutdown etc. adapted to a local installation
C It describes termination use cases D All of these

- 6 Which of the following metrics determine algorithm in terms of time and memory necessities?
 - A Computational complexity
 - B Understandability
 - C Flexibility
 - D None of these
- 7 What is pseudo state?
 - A It is the first state
 - B It is the starting point of a state chart
 - C It is the final state
 - D None of these
- 8 When the exit action does is performed?
 - A When a transaction enters the state
 - B When the task is performed
 - C When the transaction leaves the state
 - D None of these
- 9 What is dynamic model?
 - A It describes how the operation is to be done.
 - B It describes about the time of performing an event
 - C Both of these
 - D None of these
- 10 Which of the following is used to describe the movements of elements between states?
 - A State machine diagram
 - B Deployment diagram
 - C Sequence diagram
 - D None of these

Part – B (Do as Directed)

(10)

- 1 A class is a collection of things, or ideas that have the same characteristics. Each of these things or concepts is named as object. (True / False)
- 2 Each unique state in a state machine diagram has a unique name. (True / False)
- 3 Class names always begin with a capital letter, and attribute names always begin with a lowercase letter. (True / False)
- 4 The UML problem domain class symbol is a rectangle with three sections. (True / False)
- 5 Activity diagrams are not helpful in developing system sequence diagrams. (True / False)
- 6 Object Oriented analysis includes Object modeling, Dynamic modeling and Functional modeling. (True / False)
- 7 Two objects are said to be concurrent if two objects are same. (True / False)
- 8 While designing an object Classes and objects are encapsulated in a package. (True / False)
- 9 State machine diagram is similar to state diagram. (True / False)
- 10 Data store Notations deals with processing of incoming data and flowing of process data. (True / False)
