III Semester M.C.A. Degree Examination, January 2019
(CBCS Scheme)
COMPUTER SCIENCE
MCA 302 : Object Oriented Analysis and Design using UML

Time : 3 Hours Max. Marks : 70

Instruction: Answer any five questions from Section – A and any four from Section – B.

SECTION – A

Answer any five questions, each carries six marks. (5x6=30)

1. Discuss the advantages of OOAD. 6
2. Explain Views in UML. 6
3. Explain Ternary and Reflexive associations between classes with example. 6
4. Discuss ‘coupling’ and ‘Cohesion’. 6
5. Explain flexibility guidelines for Behavioral design. 6
6. Discuss different ‘invocation schemes’ w.r.t sequence Diagram. 6
7. Substantiate how sequence Diagram is different from Collaboration Diagram. 6
8. Explain Reuse of framework. Differentiate between white-Box framework and Black-Box framework. 6

SECTION – B

Answer any four questions, each carries ten marks. (4x10=40)

9. Explain the Object Oriented System Development Life Cycle. 10
10. a) Discuss the advantages of a class diagram. 5
    b) Draw a neat ‘Class Diagram’ for an “Order Processing System”. 5

P.T.O.
11. Explain the Extension Mechanism in UML 10
12. Explain state diagram in detail with a suitable diagram. 10
13. Write short notes on:
   a) Deployment Diagram 5
   b) A Package 5
   Instructions: Answer any five questions from Section A

Section A: Answer any five questions.
14. a) Explain Process Architecture in detail 5
    b) Discuss Reuse of Pattern 5

Section B: Answer any four questions.
15. a) Explain Views in UML 5
    b) Explain Tempry and Persistent Association between classes with examples 5
    c) Discuss coupling and cohesion 5
    d) Explain flexibility guidelines for Behavioural design 5
    e) Discuss difference of innovation scenario w.r.t. sequence diagram 5
    f) Discuss difference of collaboration diagram 5
    g) Explain Reuse of framework, differences between White Box framework and Black box framework 5

16. a) Explain the Object-Oriented System Development Life Cycle 5
    b) Discuss the advantages of a class diagram 5
    c) Draw a new Class Diagram for an Order Processing System 5
III Semester M.C.A. Examination, Jan./Feb. 2018
(CBCS Scheme)
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*Instruction:* Answer **any five** questions from Section – A and **any four** from Section – B.

**SECTION – A**

Answer **any five** questions each carries **six** marks :

1. Define Object State, methods and messages with examples.
2. Discuss the advantages of OOAD paradigm.
3. Compare inheritance with aggregation with suitable example.
4. Explain the significance of visibility of attributes and operation in Static Models.
5. Explain components of a Use case diagram with an example.
6. What is Cohesion? Discuss the effects of cohesion in object oriented design with an example.
7. Explain events, signals and state machines with regard to state diagram.
8. Elaborate on the reuse if libraries and frameworks.

**SECTION – B**

Answer **any four** questions each carries **ten** marks :

9. Discuss Object oriented system development life cycle in detail.
10. Discuss building blocks of activity diagram and draw an activity diagram for order processing system.
11. Discuss in detail flexibility guidelines for class diagram design.
12. Draw the class diagram for the classes and relationships involved in ATM system.
13. Write a short note on :
   a) Sequence diagram.
   b) Collaboration diagram.
   5

14. a) Explain process architecture in detail.
   b) Differentiate black box and white box framework.
   5
III Semester M.C.A. Examination, January 2016  
(CBCS)  
COMPUTER SCIENCE  
MCA 302 : Object Oriented Analysis and Design using UML  

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SECTION – A  

Answer any five questions each carries 6 marks: (5×6=30)  

1. Define object state, methods and messages with examples.  

2. Discuss views in UML with a neat sketch.  

3. Compare inheritance versus aggregation with suitable examples.  

4. Explain the importance of visibility of attributes and operations when modelling static models.  

5. Discuss coupling and cohesion.  

6. Explain events, signals and state machines with regard to state diagrams.  

7. Substantiate how sequence diagram is different from collaboration diagram.  

8. What is reuse of Framework? Differentiate between white box Framework and Black Box Framework.  

SECTION – B  

Answer any four questions each carries 10 marks: (4×10=40)  

9. Discuss Object Oriented System Development Life Cycle in detail.  

10. Discuss building blocks of Use Case Diagram and draw an Use Case Diagram for Library Management system.  

P.T.O.
11. Draw the class diagram for the classes and their relationships involved in ATM System.

12. Explain State diagram States in detail for the Library System with suitable sketches.

13. Discuss in detail the flexibility Guidelines for Behavioral Design.

14. Write short notes on:
   a) Deployment Diagram. 5
   b) Component Diagram. 5