

Roll No.

Total Pages : 3

MCA/D-17

10314

OBJECT ORIENTED ANALYSIS AND DESIGN USING UML

Paper – MCA-14-31

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *five* questions in all. Q. No 1 is compulsory.
Attempt *four* more questions selecting *one* question
from each unit.

Compulsory Question

1. Answer the following questions in brief:
 - (a) Explain the following terms in UML: collaboration note, stereotype, active class.
 - (b) Distinguish between concurrency and modularity.
 - (c) Explain the following w.r.t. state modeling : action, activity, call event, time event.
 - (d) What do you mean by hardware and software trade-offs? Explain. (4×4=16)

UNIT-I

2. (a) What are extensible mechanism in UML? Explain them with suitable examples. 8
- (b) What is dependency relationship in UML ? Explain different types of usage dependencies with a suitable examples of each. 8

3. (a) What is deployment diagram ? Explain with an example. 8
- (b) What is object diagram ? Explain with an example. 8

UNIT-II

4. Explain in the following concepts with examples : unary association, ternary association, qualifier, aggregation, multiple inheritance, meta data association attribute, sequence. 16
5. (a) What are constraints ? What are different types of constraints ? Explain with examples. 8
- (b) Draw a class diagram for University Registration System showing all possible association end names. 8

UNIT-III

6. (a) What is state diagram ? Draw a state diagram to withdraw money from ATM. 8
- (b) What is use case diagram ? Draw a use case diagram for a cell phone. 8
7. (a) What is sequence diagram ? Draw sequence diagram to send an SMS. 8
- (b) Draw activity diagram to delete a message in cell phone using concept of swim lanes. 8

UNIT-IV

8. (a) What is application class model ? Explain the steps of this model. 8
- (b) Explain any four common architectural styles. 8
9. Differentiate between the following :
- (a) Frame work and pattern. 5
- (b) Procedure-driven and event-driven control. 5
- (c) Functionality layer and mechanism layer. 6

