

[4066] - 403

P1084

Second Year M.C.A. (Faculty of Engineering)

OBJECT ORIENTED ANALYSIS & DESIGN

(2008 Pattern) (Sem. - IV) (610911) (Theory)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:-

- 1) Answers to the two sections should be written in separate books.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

**SECTION - I**

- Q1) a) Write a short note on CORBA services [6]  
b) Describe Rational Unified Process in detail [6]

OR

- Q2) a) Explain aggregation and Component Relationship (Composition). [6]  
b) Explain object oriented features with example. [6]

- Q3) a) Write short notes on [6]  
i) Generalization and Specialization  
ii) Advantages of OOAD  
b) What are the three parts of a class in UML class symbol? Discuss with example. [6]

OR

- Q4) a) Describe Realization and dependency relationship with example. [6]  
b) Explain inheritance and its types with examples. [6]



Q5) a) Based on the following description, design and define use case diagram. [6]

An engineering College has organized an International Research Conference with various subject tracks. A website is developed by the college where all the conference details are uploaded. The participant has to register online under the category - Student, Faculty, Research Scholar, Corporate. He has to upload an abstract of his paper. If it gets selected, he has to upload final paper along with the registration fees. The registration fees varies according to the category of the registrant. The payment can be done online or through DD. The paper presentation schedule is put up on the website under the defined tracks. After the conference the participant can give his feedback online.

b) Draw class diagram for the system in Q.5 a. [5]

OR

Q6) a) What is conceptual difference between "extend" and "include" relationship? Give example of each relationship. [5]

b) Create a use case diagram for library management system. [6]

## SECTION - II

Q7) a) Explain the utility value of sequence diagram. What are the notations used for sequence diagram? [6]

b) Draw sequence diagram for the following scenarios: [6]

i) Adding contacts in mobile

ii) Searching for a contact in a mobile and calling your friend on mobile.

OR

Q8) a) What are different types of interaction diagrams? Discuss in brief. [6]

b) Draw communication diagram to withdraw money from bank ATM. [6]

Q9) a) Draw a state transition diagram for fully automated washing machine. [6]

b) Explain use of frame and lifeline in UML sequence diagram. [6]



OR

- Q10) a) Explain the following with respect to state transition diagram [6]
- i) Event
  - ii) State
  - iii) Transition
- b) Discuss fork and join with example [6]

- Q11) a) Explain artifacts. How they are used in deployment diagrams? [5]
- b) Draw a package diagram for "Online shopping of products". Write the assumptions about the scope of the system. [6]

OR

- Q12) a) What is UML component? Explain need of component diagram with example. [5]
- b) How deployment diagram will be useful to fully distributed client and server system? [6]

