Oct./BE/Insem.-606

B.E. (Information Technology)
SOFTWARE DESIGN AND MODELING
(2015 Pattern) (Semester - I) (414455)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

1) *Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.*
2) *Use UML 2.0 notations to draw UML diagrams.*
3) *Figures to the right indicates full marks.*

Q1) a) State and explain structural things in UML. **[5]**

b) Explain 4+1 view of software system. **[5]**

OR

Q2) a) Explain Rumbaugh's Object Modeling Technique (OMT) in detail. **[5]**

b) Explain Layered Approach to software development. **[5]**

Q3) a) What is Use case? Explain the concept of include and extend in use case modeling. **[5]**

b) What is the purpose of use case diagram? Draw use case diagram for following medical clinic scenario.

A patient calls the clinic to make an appointment for a yearly checkup. The receptionist finds the nearest empty time slot in the appointment book and schedules the appointment for that time slot. **[5]**

OR

Q4) a) A company consists of departments. Departments are located in one or more offices.

One office acts as a headquarter. Each department has a manager who is recruited from the set of employees. Draw a class diagram which consists of all the classes in your system their attributes and operations, relationships between the classes, multiplicity specifications, and other model elements that you find appropriate. **[6]**

b) Explain qualified association and generalization with example. **[4]**

Q5) Explain the concept of swimlanes, fork and join in Activity diagram using suitable example. **[10]**

OR

Q6) Draw a state Transition diagram using UML 2.0 notions for Document Publishing process in conference. What is Composite state. **[10]**