Shilpa -(b) 46

Con.7647-12.   **KR- 5537**

(3 Hours)   **[Total Marks : 100**

N.B. : (1) Question No. **1** is **compulsory**.

        (2) Attempt any **four** questions out **of remaining** questions.

        (3) Draw **neat** diagrams, wherever **required**.

        (4) Assume **suitable** data, if **necessary**.

1. (a) Read the following **case study** and give answers of the following questions.   10
   - (i) Identify actors, use cases and classes . .
   - (ii) Draw system level use case diagram clearly stating the difference between Include and extends.

   Rent a car : In order to rent a car, first of all customer provides the start date and finish date for the rental and his personal details (name, address and credit card number) as well. All rentals are paid either via cash or credit. Company also provides a facility that if the car is stolen proper assistance and help should be provided to customer, in this regard they issue a notice that car is stolen. Each week, the Clerk will provide a list of rentals, which has been initiated the pervious week, as report to Manager who monitor's the entire system flow. Clerks can also add cars to the system. When new cars are purchased by the company Store Manager's are allowed to delete cars from system. A car is deleted from system when sold or destroyed in an accident.

   (b) Explain following terms with examples :–   10
   - (i) Inheritance
   - (ii) Aggregation
   - (iii) Generalization
   - (iv) Modularity
   - (v) Multiplicity.

2. (a) What is Requirement ? Explain various methods to collect system Requirements.   10
   (b) What are Design principles ? Explain the design principles in detail.   10

3. (a) Enlist the design pattern and explain any two design pattern in detail.   10
   (b) Draw Activity diagram for "Online Railway Reservation System".   10

4. (a) What is Cohesion and Coupling ? Explain different types of cohesion with examples.   10
   (b) Explain various software testing strategies.   10

5. (a) You are appointed as a consultant of intranet development of your college.   10
         Write a detailed problem statement and draw deployment diagram for the same.
   (b) For Library Management system design test cases for "Issue and return of Book".   10

6.   (a) What are the four phases of RUP ? Explain in detail.   10
     (b) For the Rent a Car – **case study** "Problem specification in Q.1 (a) draw class   10
           diagram.

7.   Write short notes on (any **Two**) :–   20
      (a) Frame work and components
      (b) Nested state Diagram
      (c) Interaction modelling in UML
      (d) Alpha and Beta tesing
      (e) Swim Lanes.