**Name: Id: Sec:**

**Case-01: Draw a Statechart Diagram for the following case scenario: 10**

A student object is created as prospective student when he submits the admission form to a university. Student information is verified against the admission requirements and if he meets all the requirements he is asked to sit for an admission test. But if the student doesn’t meet the requirements, he is rejected and the student object is deleted permanently from the system. Any student who fails in more than two subjects in the admission exam is also rejected. Students who pass in all the subjects or fail in one or two subjects are called for viva. At the viva the students who failed one or more subjects are given conditional admission with non-credit courses. Students who pass all the subjects are given regular student status. All sorts of admitted students are required to go through pre-advising to select appropriate courses for the semester. Once courses are selected students pay for the courses they have taken and become registered students of the semester. After each semester the student grade is evaluated and in case of low CGPA, the student becomes a probation student. High CGPA students are granted scholarships provided that they apply for it and fulfill the requirements. Probation students have to go through evaluation every semester and if the CGPA of the student doesn’t improve the studentship is cancelled from the university. After successful completion of the course a regular student becomes a graduate student and all the information of a graduate student is archived.

**Case-02: Draw a Activity Diagram for the following case scenario: 10**

In an ATM machine a customer starts a withdrawal transaction by inserting the card. Then he enters the pin, which is verified by the bank. If the pin is incorrect the machine requests for the pin again and the customer enters pin number. The verification repeated for 3 times for an incorrect pin number. If the pin is incorrect even in 4th attempt, the card is seized by the machine and the transaction is closed. If the pin is correct customer enters the amount he wishes to withdraw. The bank then checks the account balance of the customer. If the balance is greater than or equals to the withdrawal amount then money is dispatched through the machine and the information is written in the log concurrently. If the money is taken from the slot within 5 seconds, the account is debited and a transaction receipt is printed simultaneously. If money is not taken in 5 seconds, it is taken back by the machine. Then the balance is shown to the customer. The card and the receipt are then ejected at the same time, and the transaction is completed.