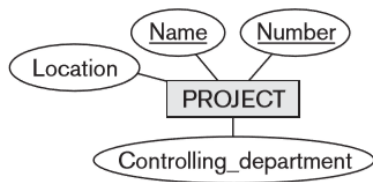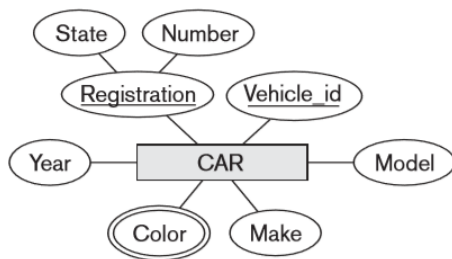**Question 1 - Map the below ER fragments, if required, list any foreign keys.**

(Elmasri & Navathe: Chapter 3: 3.8)
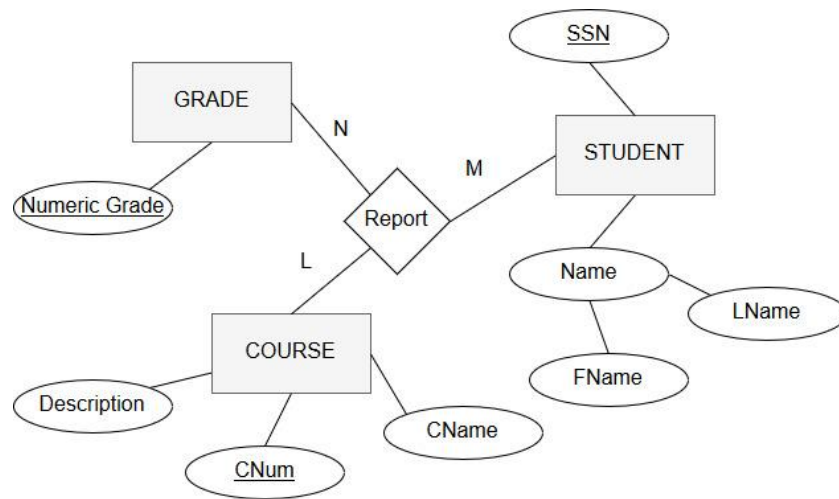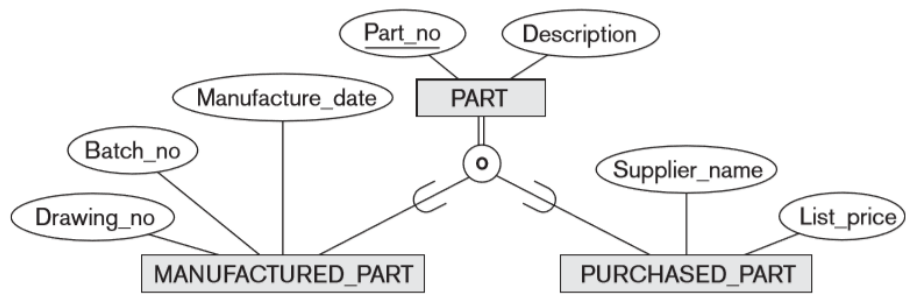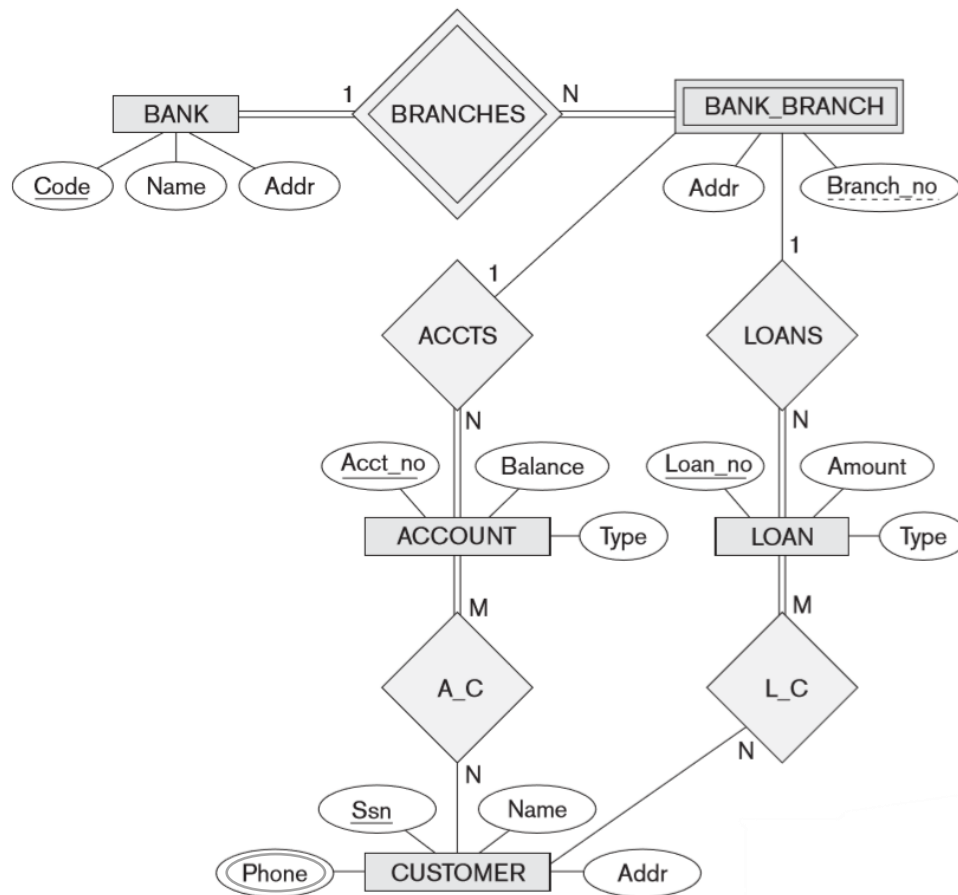
a)



b)

**c)**

**d)**

**Question 2 - Map the following ER diagrams. Show all mapping steps and include foreign keys.**

(Elmasri & Navathe: Chapter 7: 7.21)

BANK — Code, Name, Addr

1 — BRANCHES — N

BANK_BRANCH — Addr, Branch_no

1

ACCTS

1

LOANS

N

Acct_no  Balance

ACCOUNT — Type

N

Loan_no  Amount

LOAN — Type

M

A_C

M

L_C

N

N

Ssn  Name

Phone  CUSTOMER  Addr

**Question 3 - Map the following ER diagrams. Show all mapping steps and include foreign keys.**
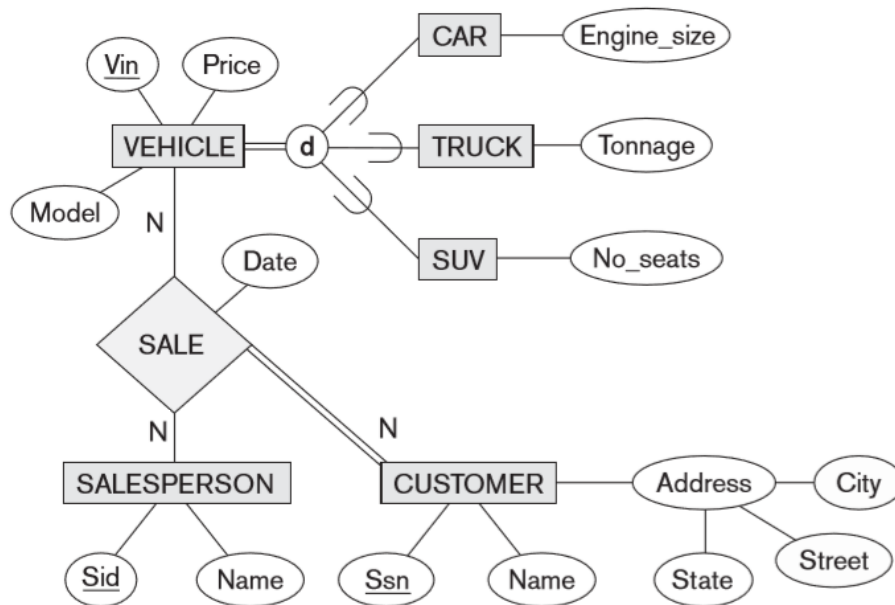
**Question 4 – Reverse Engineer the following Schema (Construct an ER Diagram from the Schema)**

REEF (reef-name, 2006-bleached-area, summer-maximal-temp, latitude, longitude)

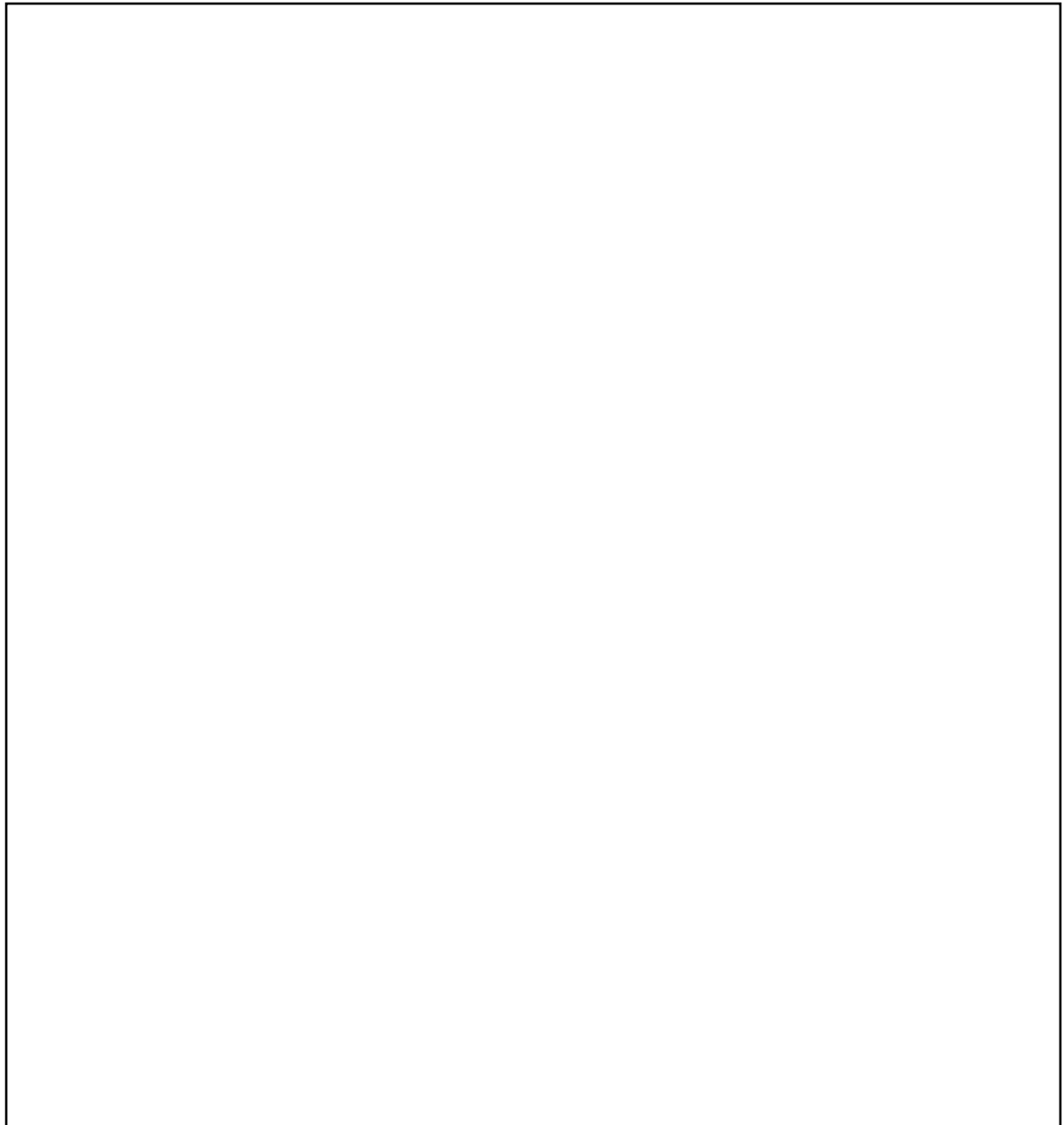CORALSAMPLING (sample-no, reef-name, coral-code, date-of-sampling, bleach-percent)

CORAL (coral-code, coral-name, thermal-threshold)

REEF-TEMP (reef-name, date-of-reading, temp-reading)

*CORALSAMPLING.coral-code references CORAL.coral-code*

*CORALSAMPLING.reef-name references REEF.reef-name*

*REEF-TEMP.reef-name references REEF.reef-temp*

**Question 5 – Reverse Engineer the following Schema (Construct an ER Diagram from the Schema)**

**PATIENT (**<u>Pid</u>**)**

**CLINIC (**<u>Rno</u>**)**

**DOCTOR (**<u>Lic-no</u>**)**

**GP (**<u>Lic-no</u>, Hours**)**

**SPECIALIST (**<u>Lic-no</u>, Specialisation**)**

**WORKS_IN (**<u>Doctor-Lic, Clinic-No</u>**)**

**APPOINTMENT (**<u>Doctor-Lic, Patient-Id, Date/Time</u>, Fee**)**

*GP.Lic-no references DOCTOR.Lic-no*

*SPECIALIST.Lic-no references DOCTOR.Lic-no*

*WORKS_IN.Doctor-Lic references DOCTOR.Lic-no*

*WORKS_IN.Clinic-No references CLINIC.Rno*

*APPOINTMENT.Doctor-Lic references DOCTOR.Lic-no*

*APPOINTMENT.Patient-Id references PATIENT.Pid*