1.Π employee.Id, employee.person_name(σ employee.person_name = works.person_name $\wedge$ works.company_name = " BigBank "(employee x works))

Π employee.id, employee.person_name, employee.city(σ employee.person_name = works.person_name $\wedge$ works.company_name = " BigBank " (employee x works))

Π employee.id, employee.person_name, employee.city(σ employee.person_name = works.person_name $\wedge$ works.salary > 10000 $\wedge$ works.company_name = 'BigBank'(employee x works))

Π employee.id, employee.person_name(σ employee.city = company.city(employee x company))

2.Π employee.id , employee.person_name(σ employee.person_name = works.person_name $\wedge$ ¬ works.company = " BigBank "(employee x works))

Π id,person_name(σ salary>=average'salary'(works))

3. Inserting a tuple:

(11111, Lory, Math, 50,000)

into the instructor table, where the department table does not have the

department Math, would violate the foreign key constraint.

   Deleting the tuple:

(Physics, Billy , 70000)

from the department table, where at least one student or instructor

tuple has dept_name as Physics, would violate the foreign key constraint.

4. Employee – id, person_name

 Works – person_name,id

Company – company_name,id