LAB 1

1.

1) ∏ ID, person_name (σ company_name =“BigBank” (σ employee.ID = works.ID (employee x works)))

2) ∏ ID, person_name, city (σ company_name =“BigBank” (σ employee.ID = works.ID (employee x works)))

3) ∏ ID, person_name, street, city (σ company_name =“BigBank” ∧ salary>10000 (σ employee.ID = works.ID (employee x works)))

4) ∏ ID, person_name (σ employee.city = company.city (employee ⋈ employee.ID = works.ID works ⋈ works.company_name=company.company_name company)

2.

1) ∏ ID, person_name (σ company_name ≠ “BigBank” (σ employee.ID = works.ID (employee x works)))

2) ∏ ID, person_name (σ salary>avg(salary) (σ employee.ID = works.ID (employee x works)))

3.

Inserting:

(00038, Ualikhan, Math, 400000)

Inserting into instructor table Math dept_name which is not in department table will violate the foreign-key constraint.

Deleting:

(Chemistry, Central , 5000000)

Deleting Chemistry dept_name where we have at least one instructor will violate the foreign-key constraint.

4.

employee (ID, person_name, street, city)

works (ID, person_name, company_name, salary)

company (company_name, city)