Database

Lab-2

1.

a) π(Employee.id, Employee.person_name)
σ(Employee.id=Works.id ^ Works.company_name = 'BigBank')
Employee × Works

b) π(Employee.id, Employee.person_name, Employee.city)
σ(Employee.person_name=Works.person_name ^ Works.company_name = 'BigBank')
Employee × Works

c) π(Employee)
σ(Employee.person_name=Works.person_name ^ Works.company_name = 'BigBank'
^ Works.salary > 10000')
Employee × Works

d) π(Employee.id, Employee.person_name)
σ(Employee.person_name=Works.person_name ^ Company.city = Employee.city)
Employee × Works × Company

2.

a) π(Employee.id, Employee.person_name)
σ(Employee.id=Works.id ^ Works.company_name != 'BigBank')
Employee × Works

b) ??

3.

Inserting a tuple:

(10111, Ostrom, Economics, 110,000)

into the instructor table, where the department table does not have the department Economics, would violate the foreign key constraint.

• Deleting the tuple:

(Biology, Watson, 90000)

from the department table, where at least one student or instructor tuple has dept name as Biology, would violate the foreign key constraint.

4.

id