```
#1.
show tables;

#2.
SELECT
    `first_name`, `last_name`, `gender`
FROM
    `employees`;

#3.
SELECT DISTINCT
    (`title`)
FROM
    `titles`;

#4.
SELECT
    COUNT(*) AS `emp_amt`
FROM
    `employees`;

#5.
SELECT
    COUNT(*) AS `salary_amt`
FROM
    `salaries`;

#6.
SELECT
    COUNT(*) AS `depart_amt`
FROM
    `departments`;

#7.
SELECT
    `dept_name`
FROM
    `departments`;

#8.
```

```sql
SELECT
    `first_name`, `last_name`
FROM
    `employees`
WHERE
    `gender` = 'F';
```

#9.
```sql
SELECT
    COUNT(*) AS `MaleAmt`
FROM
    `employees`
WHERE
    gender = 'M';
```

#10.
```sql
SELECT
    *
FROM
    `employees`
WHERE
    `hire_date` < '1990-01-01';
```

#11.
```sql
SELECT
    *
FROM
    `employees`
WHERE
    `hire_date` > '1995-12-31'
        AND gender = 'M';
```

#12.
```sql
SELECT
    COUNT(*) AS `emp_amt`
FROM
    `employees`
WHERE
    `first_name` IN ('Adin' , 'Deniz', 'Youssef', 'Roded');
```

```
#13a.
SELECT
    COUNT(DISTINCT emp_no) AS 'amt'
FROM
    titles
WHERE
    `title` LIKE '%Engineer';

#13b.
SELECT
    COUNT(DISTINCT emp_no) AS 'amt'
FROM
    titles
WHERE
    `title` NOT LIKE '%Engineer';

#14.
SELECT
    COUNT(*) AS 'amt'
FROM
    `employees`
WHERE
    `hire_date` BETWEEN '1990-01-01' AND '1994-01-01';

#15.
SELECT DISTINCT
    (`last_name`)
FROM
    `employees`
WHERE
    (`birth_date` < '1970-01-01'
        AND `hire_date` > '1996-12-31'
        AND `gender` = 'F')
ORDER BY `last_name`;

#16.
SELECT
    `gender`, COUNT(*) AS `amt`
FROM
    `employees`
```

```sql
WHERE
    `hire_date` < '1989-01-01'
GROUP BY gender;

#17a.
SELECT
    employees.gender, departments.dept_name, COUNT(*) AS 'amt'
FROM
    employees
        LEFT JOIN
    dept_emp ON employees.emp_no = dept_emp.emp_no
        LEFT JOIN
    departments ON dept_emp.dept_no = departments.dept_no
GROUP BY employees.gender , departments.dept_name
ORDER BY employees.gender

#17b
SELECT
    gender, COUNT(*) AS 'amt'
FROM
    employees
WHERE
    hire_date BETWEEN '1994-01-01' AND '1996-12-31'
GROUP BY gender

#18
# not quite sure what the question meant


#19
# Option 1 if we want all titles (from the question)
SELECT
    employees.first_name, employees.last_name, titles.title
FROM
    employees
        LEFT JOIN titles ON employees.emp_no = titles.emp_no

#20
SELECT
    departments.dept_no, AVG(salaries.salary) AS 'avg_sal'
```

```
FROM
    departments
        LEFT JOIN dept_emp ON departments.dept_no = dept_emp.dept_no
        LEFT JOIN employees ON dept_emp.emp_no = employees.emp_no
        LEFT JOIN salaries ON employees.emp_no = salaries.emp_no
GROUP BY departments.dept_no

#21
SELECT
    departments.dept_no,
    COUNT(DISTINCT employees.emp_no) AS 'empAmt',
    AVG(salaries.salary) AS 'avgSal'
FROM
    departments
        LEFT JOIN dept_emp ON departments.dept_no = dept_emp.dept_no
        LEFT JOIN employees ON dept_emp.emp_no = employees.emp_no
        LEFT JOIN salaries ON employees.emp_no = salaries.emp_no
GROUP BY departments.dept_no

#22
SELECT
    departments.dept_no,
    COUNT(employees_with_130000_salary.emp_no) AS 'empAmt'
FROM
    departments
        LEFT JOIN dept_emp ON departments.dept_no = dept_emp.dept_no
        LEFT JOIN
    (SELECT
        *
    FROM
        employees
    WHERE
        emp_no IN (SELECT DISTINCT
                emp_no
            FROM
                salaries
            WHERE
                salary >= 130000)) emp_with_130000_salary ON dept_emp.emp_no =
emp_with_130000_salary.emp_no
GROUP BY departments.dept_no
```