**PART -1**

**1.** Write a query to display the names (first\_name, last\_name) using alias name “First Name", "Last Name"

Ans :-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME AS 'First Name', LAST\_NAME AS 'Last Name' FROM `employees`;

**2.** Write a query to get unique department ID from employee table.

Ans:-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DEPARTMENT\_ID FROM employees;

**3.** Write a query to get all employee details from the employee table order by first name, descending.

Ans:-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME FROM `employees` ORDER BY FIRST\_NAME DESC;

**4.** Write a query to get the names (first\_name, last\_name), salary, PF of all the employees (PF is calculated as 15% of salary)

Ans:-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME, LAST\_NAME, SALARY, SALARY\*.15PF FROM employees;

**5.** Write a query to get the employee ID, names (first\_name, last\_name), salary in ascending order of salary.

Ans:-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) EMPLOYEE\_ID, FIRST\_NAME, LAST\_NAME, SALARY FROM employees ORDER BY SALARY;

**6.** Write a query to get the total salaries payable to employees.

Ans:-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [SUM](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_sum)(SALARY) FROM employees;

**7.** Write a query to get the maximum and minimum salary from employees table.

Ans:-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [MIN](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_min)(SALARY), [MAX](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_max)(SALARY) FROM `employees`;

**8.** Write a query to get the average salary and number of employees in the employees table.

Ans:-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [COUNT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count)(\*),[AVG](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_avg)(SALARY) FROM `employees`;

**9.** Write a query to get the number of employees working with the company.

Ans:-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [COUNT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count)(\*) FROM `employees`;

**10.** Write a query to get the number of jobs available in the employees table.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [COUNT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count)(DISTINCT JOB\_ID) FROM employees;

**11.** Write a query get all first name from employees table in upper case.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) UPPER(FIRST\_NAME) FROM employees;

**12.** Write a query to get the first 3 characters of first name from employees table.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) SUBSTRING(FIRST\_NAME,1,3) FROM employees;

**13.** Write a query to calculate 171\*214+625.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) 171\*214+625 result;

**14.** Write a query to get the names (for example Ellen Abel, Sundar Ande etc.) of all the employees from employees table

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) CONCAT(FIRST\_NAME,' ',LAST\_NAME) 'EMPLOYEE NAME' FROM employees;

**15.** Write a query to get first name from employees table after removing white spaces from both side.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) TRIM(FIRST\_NAME) FROM employees;

**16.** Write a query to get the length of the employee names (first\_name, last\_name) from employees table.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME, LAST\_NAME, LENGTH(FIRST\_NAME)+ LENGTH(LAST\_NAME)'Length of Name' FROM employees;

**17.** Write a query to check if the first\_name fields of the employees table contains numbers.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) \* FROM `employees` WHERE FIRST\_NAME [REGEXP](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/regexp.html#operator_regexp) '[0-9]';

**18.** Write a query to select first 10 records from a table.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) \* FROM `employees` LIMIT 10;

**19.** Write a query to get monthly salary (round 2 decimal places) of each and every employee

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME, LAST\_NAME, ROUND(SALARY/12,2) AS 'MONTHLY SALARY' FROM `employees`

**PART - 2**

1. Write a query to display the name (first\_name, last\_name) and salary for all employees whose salary is not in the range $10,000 through $15,000.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) CONCAT(FIRST\_NAME,' ',LAST\_NAME) AS 'NAME',SALARY FROM employees WHERE SALARY [NOT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_not) BETWEEN 10000 [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_and) 15000;

1. Write a query to display the name (first\_name, last\_name) and department ID of all employees in departments 30 or 100 in ascending order.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) CONCAT(FIRST\_NAME,' ',LAST\_NAME) AS Name, DEPARTMENT\_ID FROM employees WHERE DEPARTMENT\_ID=30 [OR](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_or) DEPARTMENT\_ID=100 ORDER BY DEPARTMENT\_ID;

1. Write a query to display the name (first\_name, last\_name) and salary for all employees whose salary is not in the range $10,000 through $15,000 and are in department 30 or 100.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) CONCAT(FIRST\_NAME,' ', LAST\_NAME) AS Name, SALARY,DEPARTMENT\_ID FROM employees WHERE DEPARTMENT\_ID [IN](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/comparison-operators.html#function_in)(30,100) [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_and) SALARY [NOT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_not) BETWEEN 10000 [and](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_and) 15000;

1. Write a query to display the name (first\_name, last\_name) and hire date for all employees who were hired in 1987.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) CONCAT(FIRST\_NAME,' ',LAST\_NAME),HIRE\_DATE FROM employees WHERE HIRE\_DATE [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/string-comparison-functions.html#operator_like) '1987%';

1. Write a query to display the first\_name of all employees who have both "b" and "c" in their first name.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) FIRST\_NAME FROM `employees` WHERE FIRST\_NAME [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/string-comparison-functions.html#operator_like) '%b%' [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_and) FIRST\_NAME [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/string-comparison-functions.html#operator_like) '%c%';

1. Write a query to display the last name, job, and salary for all employees whose job is that of a Programmer or a Shipping Clerk, and whose salary is not equal to $4,500, $10,000, or $15,000.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) LAST\_NAME, JOB\_ID, SALARY FROM employees WHERE JOB\_ID [IN](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/comparison-operators.html#function_in) ('IT\_PROG','SH\_CLERK') [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_and) SALARY [NOT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_not) [IN](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/comparison-operators.html#function_in)(4500,10000,15000);

1. Write a query to display the last name of employees whose names have exactly 6 characters.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) CONCAT(FIRST\_NAME,' ',LAST\_NAME) AS Name,LENGTH(LAST\_NAME) AS Length FROM employees HAVING Length=6;

1. Write a query to display the last name of employees having 'e' as the third character.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) LAST\_NAME FROM `employees` WHERE LAST\_NAME [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/string-comparison-functions.html#operator_like) '\_\_e%';

1. Write a query to display the jobs/designations available in the employees table.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DISTINCT JOB\_ID FROM employees;

1. Write a query to display the name (first\_name, last\_name), salary and PF (15% of salary) of all employees.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) CONCAT(FIRST\_NAME,' ',LAST\_NAME), SALARY, SALARY\*.15PF FROM employees;

**11.** Write a query to select all record from employees where last name in 'BLAKE', 'SCOTT', 'KING' and 'FORD'.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) \* FROM `employees` WHERE LAST\_NAME [IN](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/comparison-operators.html#function_in) ('King','Scott','Ford','Blake','Jones');

**PART - 3**

**1.** Write a query to list the number of jobs available in the employees table.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [COUNT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count)(DISTINCT JOB\_ID) FROM employees;

**2.** Write a query to get the total salaries payable to employees.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [SUM](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_sum)(SALARY) AS PaybleAmount FROM employees;

**3.** Write a query to get the minimum salary from employees table.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [MIN](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_min)(SALARY) FROM employees;

**4.** Write a query to get the maximum salary of an employee working as a Programmer.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [MAX](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_max)(SALARY) FROM `employees` WHERE JOB\_ID = 'IT\_PROG';

**5.** Write a query to get the average salary and number of employees working the department 90.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [AVG](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_avg)(SALARY), [COUNT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count)(DEPARTMENT\_ID) FROM employees WHERE DEPARTMENT\_ID = 90;

**6.** Write a query to get the highest, lowest, sum, and average salary of all employees.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [MAX](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_max)(SALARY), [MIN](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_min)(SALARY), [SUM](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_sum)(SALARY),[AVG](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_avg)(SALARY) FROM employees;

**7.**Write a query to get the number of employees with the same job.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) JOB\_ID,[COUNT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count)(JOB\_ID) FROM employees GROUP BY JOB\_ID;

**8.** Write a query to get the difference between the highest and lowest salaries.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [MAX](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_max)(SALARY)-[MIN](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_min)(SALARY) AS Difference FROM employees;

**9.** Write a query to find the manager ID and the salary of the lowest-paid employee for that manager.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) MANAGER\_ID, [MIN](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_min)(SALARY) FROM employees GROUP BY MANAGER\_ID;

**10.** Write a query to get the department ID and the total salary payable in each department.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DEPARTMENT\_ID, [SUM](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_sum)(SALARY) FROM employees GROUP BY DEPARTMENT\_ID;

**11.** Write a query to get the average salary for each job ID excluding programmer.

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) JOB\_ID, (SALARY) FROM employees WHERE JOB\_ID != 'IT\_PROG' GROUP BY JOB\_ID;

**12.** Write a query to get the total salary, maximum, minimum, average salary of employees (job ID wise), for department ID 90 only.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [MAX](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_max)(SALARY),[MIN](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_min)(SALARY),[SUM](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_sum)(SALARY),[AVG](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_avg)(SALARY), JOB\_ID, DEPARTMENT\_ID FROM employees WHERE DEPARTMENT\_ID =90 GROUP BY JOB\_ID;

**13.** Write a query to get the job ID and maximum salary of the employees where maximum salary is greater than or equal to $4000.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) JOB\_ID, [MAX](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_max)(SALARY) FROM employees GROUP BY JOB\_ID HAVING [MAX](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_max)(SALARY)>= 4000;

**14.** Write a query to get the average salary for all departments employing more than 10 employees.

Ans-

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DEPARTMENT\_ID, [AVG](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_avg)(SALARY), [COUNT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count)(SALARY) AS [count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count) FROM employees GROUP BY DEPARTMENT\_ID HAVING [count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count) >10;

**PART - 4**

**1.** Write a query to find the name (first\_name, last\_name) and the salary of the employees who have a higher salary than the employee whose last\_name='Bull'.

Ans-