**Interview Questions on SQL are based on following two tables, Employee Table and Employee Incentive Table.**

**Table Name : Employee EMP\_ID As PRIMARY KEY**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| EMPLOYEE\_ID | FIRST\_NAME | LAST\_NAME | SALARY | JOINING\_DATE | DEPARTMENT | | |
| 1 | Venkatesh | S | 100000 | 08/28/2015 | | BANKING | | |
| 2 | Ragavi | P | 75000 | 08/28/2015 | | | BUSINESS | |
| 3 | Gopinath | C | 50000 | 03/02/2016 | | | PHARMA | |
| 4 | Dinesh | G | 50000 | 03/02/2016 | | | INSURANCE | |
| 5 | Saibabu | E | 40000 | 07/08/2017 | | | SOFTWARE | |
| 6 | Hasan | S | 29000 | 07/08/2017 | | | MANUFACTURING | |
| 7 | Divya | P | 33000 | 07/08/2017 | | | HEALTHCARE | |
| 8 | Aravindan | R | 40000 | 07/08/2017 | | | HEALTHCARE | |
| 9 | Sathish | MD | 45000 | 03/02/2016 | | | AUTOMOBILE | |
| 10 | Prasanth | PKP | 34000 | 03/02/2016 | | | INSURANCE | |
| 11 | Vijay | R | 25684 | 03/02/2016 | | | BUSINESS | |
| 12 | Sivakumar | K | 54789 | 03/02/2016 | | | SOFTWARE | |

**Table Name : Incentives**

|  |  |  |
| --- | --- | --- |
| **EMPLOYEE\_REF\_ID** | **INCENTIVE\_DATE** | **INCENTIVE\_AMOUNT** |
| 1 | 01-FEB-16 | 5000 |
| 2 | 01-FEB-16 | 3000 |
| 3 | 01-FEB-17 | 4000 |
| 1 | 01-JAN-17 | 4500 |
| 2 | 01-JAN-17 | 3500 |

**SQL Queries Interview Questions and Answers on "SQL Select" - Examples**

1. **Get all employee details from the employee table**

select \* from emptable;

1. **Get First\_Name,Last\_Name from employee table**

**s**elect FIRST\_NAME,LAST\_NAME from emptable;

1. **Get First\_Name from employee table using alias name “Employee Name”**

select FIRST\_NAME as Employee\_Name from emptable;

1. **Get First\_Name from employee table in upper case**

select upper(FIRST\_NAME) from emptable;

1. **Get First\_Name from employee table in lower case**

**s**elect lower(FIRST\_NAME) from emptable;

1. **Get unique DEPARTMENT from employee table**

select distinct DEPARTMENT from emptable;

1. **Select first 3 characters of FIRST\_NAME from EMPLOYEE**

select substring(FIRST\_NAME,1,3) from emptable;

1. **Get position of 'a' in name 'ragavi' from employee table**

**s**elect position(‘a’ in “ragavi”);

1. **Get FIRST\_NAME from employee table after removing white spaces from right side**

select RTRIM(FIRST\_NAME) from emptable;

1. **Get FIRST\_NAME from employee table after removing white spaces from left side**

select LTRIM(FIRST\_NAME) from emptable;

11. **Get length of FIRST\_NAME from employee table**

select LENGTH(‘FIRST\_NAME’);

12. **Get First\_Name from employee table after replacing 'a' with '$'**

select REPLACE(FIRST\_NAME,'a','$') from emptable;

13. **Get First\_Name and Last\_Name as single column from employee table separated by a '\_'**

select FIRST\_NAME '\_' from emptable;

14. **Get FIRST\_NAME ,Joining year,Joining Month and Joining Date from employee table**

select FIRST\_NAME, YEAR(JOINING\_DATE) AS Joining\_Year, MONTH(JOINING\_DATE) AS Joining\_Month, DAY(JOINING\_DATE) AS Joining\_Date from emptable ;

**Database SQL Queries Interview Questions and answers on "SQL Order By"**

**15. Get all employee details from the employee table order by First\_Name Ascending**

select \* from emptable order by FIRST\_NAME ASC;

**16. Get all employee details from the employee table order by First\_Name descending**

select \* from emptable order by FIRST\_NAME DESC;

**17. Get all employee details from the employee table order by First\_Name Ascending and Salary descending**

select \* from emptable e ORDER BY e.FIRST\_NAME ASC, e.SALARY DESC;

**SQL Queries Interview Questions and Answers on "SQL Where Condition" - Examples**

**18. Get employee details from employee table whose employee name is “Dinesh”**

select \* from emptable where FIRST\_NAME = 'Dinesh';

**19. Get employee details from employee table whose employee name are “Dinesh” and “Roy”**

select \* from emptable where FIRST\_NAME IN ('Dinesh', 'Roy');

**20. Get employee details from employee table whose employee name are not “Dinesh” and “Roy”**

select \* from emptable where FIRST\_NAME NOT IN ('Dinesh', 'Roy');

**SQL Queries Interview Questions and Answers on "SQL Wild Card Search" - Examples**

**21. Get employee details from employee table whose first name starts with 's'**

select \* from emptable where FIRST\_NAME like "s%";

**22. Get employee details from employee table whose first name contains 'v'**

select \* from emptable where FIRST\_NAME like "%v%";

1. **Get employee details from employee table whose first name ends with 'n'**

select \* from emptable where FIRST\_NAME like "%n" and name like '\_\_\_\_';

**SQL Queries Interview Questions and Answers on "SQL Pattern Matching" - Examples**

1. **Get employee details from employee table whose first name ends with 'n' and name contains 4 letters.**

select \* from emptable where FIRST\_NAME like "%n" && ;

1. **Get employee details from employee table whose first name starts with 'J' and name contains 4 letters**

select \* from emptable where FIRST\_NAME like "%j" ;

**26. Get employee details from employee table who’s Salary greater than 60000**

select \* from emptable where SALARY > 60000;

**27. Get employee details from employee table who’s Salary less than 80000**

select \* from emptable where SALARY <80000;

**28. Get employee details from employee table who’s Salary between 50000 and 80000**

select \* from emptable where SALARY BETWEEN 50000 AND 80000;

**29. Get employee details from employee table whose name is venkatesh and ragavi**

select \* from emptable WHERE FIRST\_NAME IN ('venkatesh', 'ragavi');

**SQL Queries Interview Questions and Answers on "SQL DATE Functions" - Examples**

**30. Get employee details from employee table whose joining year is “2015”**

select \* from emptable where YEAR(JOINING\_DATE) = 2015;

**31. Get employee details from employee table whose joining month is “January”**

select \* from emptable where MONTH(JOINING\_DATE) = 01;

**32. Get employee details from employee table who joined before January 1st 2017**

select \* from emptable where JOINING\_DATE < '2017-01-01';

**33. Get employee details from employee table who joined after January 31st 2016**

select \* from emptable where JOINING\_DATE > '2016-01-31';

**35. Get Joining Date and Time from employee table**

select JOINING\_DATE ,curtime from emptable;

1. **Get Joining Date,Time including milliseconds from employee table.**

SELECT EXTRACT(HOUR FROM joining\_datetime) AS hour,EXTRACT(MINUTE FROM joining\_datetime) AS minute,EXTRACT(SECOND FROM joining\_datetime) AS second

FROM emptable;

1. **Get difference between JOINING\_DATE and INCENTIVE\_DATE from employee and incentives table**

TIMESTAMPDIFF(HOUR, e.JOINING\_DATE, i.INCENTIVE\_DATE) AS date\_diff\_hours

**38. Get database date**

select curdate();

**SQL Queries Interview Questions and Answers on "SQL Escape Characters" - Examples**

**39.Get names of employees from employee table who has '%' in Last\_Name. Tip : Escape character for special characters in a query.**

SELECT FIRST\_NAME, LAST\_NAME FROM emptable WHERE LAST\_NAME LIKE '%\%%';

**40. Get Last Name from employee table after replacing special character with white space**

**SQL Queries Interview Questions and Answers on "SQL Group By Functions" - Examples**

SELECT REPLACE(LAST\_NAME, '%', ' ') AS modified\_LAST\_NAME FROM emptable;

**41. Get department,total salary with respect to a department from employee table.**

select DEPARTMENT, SUM(salary) AS SALARY FROM emptable GROUP BY DEPARTMENT;

1. **Get department,total salary with respect to a department from employee table order by total salary descending**

select DEPARTMENT, SUM(SALARY) AS TOTAL\_SALARY FROM emptable GROUP BY DEPARTMENT ORDER BY TOTAL\_SALARY DESC;

**SQL Queries Interview Questions and Answers on "SQL Mathematical Operations using Group By" - Examples**

1. **Get department,no of employees in a department,total salary with respect to a department from employee table order by total salary descending**

select DEPARTMENT, COUNT(\*) AS num\_employees, SUM(SALARY) AS total\_salary

FROM emptable GROUP BY DEPARTMENT ORDER BY total\_salary DESC;

**44. Get department wise average salary from employee table order by salary ascending**

select DEPARTMENT, AVG(salary) AS AVERAGE\_SALARY FROM emptable GROUP BY DEPARTMENT ORDER BY AVERAGE\_SALARY ASC;

**45. Get department wise maximum salary from employee table order by salary ascending**

SELECT DEPARTMENT, MAX(SALARY) AS max\_salary FROM emptable GROUP BY DEPARTMENT ORDER BY max\_salary ASC;

**46. Get department wise minimum salary from employee table order by salary ascending**

SELECT DEPARTMENT, MIN(SALARY) AS min\_salary FROM emptable GROUP BY DEPARTMENT ORDER BY min\_salary ASC;

**47. Select no of employees joined with respect to year and month from employee table**

select year(JOINING\_DATE) AS joining\_year, MONTH(JOINING\_DATE) AS joining\_month, COUNT(\*) AS employee\_count FROM emptable GROUP BY joining\_year, joining\_month;

1. **Select department,total salary with respect to a department from employee table where total salary greater than 800000 order by Total\_Salary descending**

SELECT department, SUM(salary) AS total\_salary FROM emptable

GROUP BY DEPARTMENT HAVING total\_salary > 800000 ORDER BY total\_salary DESC;

**SQL Queries Interview Questions and Answers on "SQL Joins" - Examples**

1. **Select first\_name, incentive amount from employee and incentives table for those employees who have incentives.**

SELECT e.first\_name, i.incentive\_amount FROM emptable e JOIN incentives i ON e.employee\_id = i.employee\_id;

**50. Select first\_name, incentive amount from employee and incentives table for those employees who have incentives and incentive amount greater than 3000**

SELECT emp.first\_name, inc.incentive\_amount FROM emptable INNER JOIN incentives inc ON emp.employee\_id = inc.employee\_id WHERE inc.incentive\_amount > 3000;

**51. Select first\_name, incentive amount from employee and incentives table for all employes even if they didn't get incentives**

**52. Select first\_name, incentive amount from employee and incentives table for all employees even if they didn't get incentives and set incentive amount as 0 for those employees who didn't get incentives.**

**53. Select first\_name, incentive amount from employee and incentives table for all employees who got incentives using left join**

**54. Select max incentive with respect to employee from employee and incentives table using sub query**

**Advanced SQL Queries Interview Questions and Answers on "Top N Salary" - Examples**

**55. Select TOP 2 salary from employee table**

SELECT TOP 2 SALARY FROM emptable ORDER BY SALARY DESC;

**56. Select TOP N salary from employee table**

SELECT TOP (N) SALARY FROM emptable ORDER BY SALARY DESC;

**57. Select 2nd Highest salary from employee table**

SELECT SALARY FROM emptable ORDER BY SALARY DESC LIMIT 1 OFFSET 1;

**58. Select Nth Highest salary from employee table**

SELECT SALARY FROM emptable ORDER BY SALARY DESC LIMIT 1 OFFSET (N - 1); **SQL Queries Interview Questions and Answers on "SQL Union" - Examples**

**59. Select First\_Name,LAST\_NAME from employee table as separate rows  
60. What is the difference between UNION and UNION ALL ?**

**"Advanced SQL Queries Interview Questions and Answers"**

**61. Select employee details from employee table if data exists in incentive table ?**

SELECT emp.\* FROM emptable INNER JOIN incentive inc ON emp.EMPLOYEE\_ID = inc.EMPLOYEE\_ID;

**62. How to fetch data that are common in two query results ?**

SELECT column1, column2 FROM table1 INTERSECT SELECT column1, column2 FROM table2;

**63. Get Employee ID's of those employees who didn't receive incentives without using sub query ?**

SELECT emptable1.EMPLOYEE\_ID FROM employee emptable LEFT JOIN incentive inc ON emp.EMPLOYEE\_ID = inc.EMPLOYEE\_ID WHERE inc.EMPLOYEE\_ID IS NULL;

**64. Select 20 % of salary from venkat , 10% of Salary for gopi and for other 15 % of salary from employee table**

SELECT EMPLOYEE\_NAME, CASE WHEN EMPLOYEE\_NAME = 'Venkat' THEN salary \* 0.2 WHEN EMPLOYEE\_NAME = 'Gopi' THEN salary \* 0.1 ELSE salary \* 0.15 END AS percentage\_of\_SALARY FROM emptable;

**65. Select Banking as 'Bank Dept', Insurance as 'Insurance Dept' and Services as 'Pharma Dept' from employee table**

SELECT 'Banking' AS 'Bank Dept', 'Insurance' AS 'Insurance Dept', 'Services' AS 'Pharma Dept'

FROM emptable;

**66. Delete employee data from employee table who got incentives in incentive table**

DELETE FROM emptable WHERE EMPLOYEE\_ID IN (SELECT DISTINCT emptable .EMPLOYEE\_ID FROM emptable INNER JOIN incentive inc ON emptable .EMPLOYEE\_ID = inc.EMPLOYEE\_ID);

**67. Insert into employee table Last Name with " ' " (Single Quote - Special Character)**

INSERT INTO emptable1 (last\_name) VALUES ('O''Connor');

**68. Select Last Name from employee table which contain only numbers**

SELECT last\_name FROM emptable1 WHERE last\_name REGEXP '^[0-9]+$';

**69. Write a query to rank employees based on their incentives for a month**

SELECT EMPLOYEE\_NAME, INCENTIVE\_AMOUNT, RANK() OVER (ORDER BY incentive\_amount DESC) AS rank FROM incentive

WHERE MONTH(date\_column) = <month\_value>

**70**. **Update incentive table where employee name is 'Dinesh'**

update incentive SET EMPLOYEE\_NAME = NAME WHERE employee\_name = 'Dinesh';