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**

select 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) as uppercaseFIRST\_NAME from emptable;

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

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

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

select 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) from emptable;

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

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

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

select concat(FIRST\_NAME,'\_',LAST\_NAME) as FULL\_NAME from emptable;

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

Select FIRST\_NAME, year(JOINING\_DATE) JoinYear , month(JOINING\_DATE), day(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\_Namedescending**

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 order by FIRST\_NAME ASC , 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";

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

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

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

**24. 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\_\_\_\_" ;

**25. 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 (select 50000) and 80000**;**

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

select \*from emptable where FIRST\_NAME = "Venkatesh" and FIRST\_NAME= "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 extract(year from JOINING\_DATE)=2015;

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

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

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

select\*from emptable where extract(year from JOINING\_DATE)<2017;

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

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

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

select FIRST\_NAME,INCENTIVE\_DATE - JOINING\_DATE from emptable A INNER JOIN incentive B on A.EMPLOYEE\_ID=B.EMPLOYEE\_REF\_ID;

**38. Get database date**

select sysdate() from dual;

**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 from emptable where LAST\_NAME like '%\%%';

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

Select replace(LAST\_NAME,"%"," ") from emptable;

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

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

select DEPARTMENT,SUM(SALARY) TOTAL\_SALARY from emptable group by DEPARTMENT;

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

select DEPARTMENT,SUM(SALARY) 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**

**43. 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(FIRST\_NAME),sum(SALARY) 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 avg(SALARY) from emptable order by SALARY ASC;

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

select max(SALARY) from emptable order by SALARY ASC;

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

select min(SALARY) from emptable order by SALARY ASC;

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

select TO\_CHAR (JOINING\_DATE,'YYYY') JOIN\_YEAR, TO\_CHAR (JOINING\_DATE,'MM') JOIN\_MONTH, COUNT(\*) TOTAL\_EMP from emptable group by TO\_CHAR (JOINING\_DATE,'YYYY'),TO\_CHAR(JOINING\_DATE,'MM');

**48. 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) TOTAL\_SALARY from emptable group by DEPARTMENT having sum(SALARY) >800000 order by TOTAL\_SALARY DESC;

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

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

select emptable.FIRST\_NAME, incentive.INCENTIVE\_AMOUNT from emptable inner join incentive on emptable.EMPLOYEE\_ID=incentive.EMPLOYEE\_REF\_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 emptable.FIRST\_NAME, incentive.INCENTIVE\_AMOUNT from emptable inner join incentive on emptable.EMPLOYEE\_ID=incentive.EMPLOYEE\_REF\_ID and INCENTIVE\_AMOUNT>3000;

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

select emptable.FIRST\_NAME, incentive.INCENTIVE\_AMOUNT from emptable left join incentive on emptable.EMPLOYEE\_ID=incentive.EMPLOYEE\_REF\_ID;

**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.**

select FIRST\_NAME, NVL(INCENTIVE\_AMOUNT,0) from emptable left join incentive on emptable. EMPLOYEE\_ID=incentive.EMPLOYEE\_REF\_ID;

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

select FIRST\_NAME, NVL(INCENTIVE\_AMOUNT,0) from emptable right join incentive B ON emptable.EMPLOYEE\_ID=incentive.EMPLOYEE\_REF\_ID;

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

select DEPARTMENT, (select NVL(MAX(INCENTIVE\_AMOUNT),0) from incentive where EMPLOYEE\_REF\_ID=EMPLOYEE\_ID) MAX\_INCENTIVE from emptable;

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

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

select \* from (select \* from EMPLOYEE order by SALARY desc) where ROWNUM <3;

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

select \* from (select \* from emptable order by SALARY DESC) where ROWNUM

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

select min(SALARY) from (select \* from (select \* from emptable order by SALARY desc) where ROWNUM <3);

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

Select min(SALARY) from (select \* from (select \* from emptable order by SALARY desc) where ROWNUM );

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

**59. Select First\_Name,LAST\_NAME from employee table as separate rows?**

select FIRST\_NAME from emptable union select LAST\_NAME from emptable;

**60. What is the difference between UNION and UNION ALL ?**UNION and UNION ALL in SQL are used to retrieve data from two or more tables.

* UNION returns distinct records from both the table, and it extracts the rows that are being specified in the query
* UNION ALL returns all the records from both the tables and it all extracts all the rows including the duplicates (repeated values) from both the queries.

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

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

Select \*from where emptable exists (select\*from incentive );

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

select \* from EMPLOYEE where EMPLOYEE\_ID INTERSECT select \* from EMPLOYEE where EMPLOYEE\_ID ;

EXPLANATION: Here "INTERSECT" command is used to fetch data that are common in 2queries. In this example, we had taken EMPLOYEE table in both the queries.

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

Select EMPLOYEE\_Id from emptable minus select EMPLOYEE\_REF\_ID from incentives;

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

Select FIRST\_NAME, CASE FIRST\_NAME when "venkat" then SALARY \* .2 when "gopi" then salary \* .10 else SALARY \* .15 end as Amount from emptable

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

select case DEPARTMENT when 'Banking' then 'Bank Dept' when 'Insurance' then 'Insurance Dept' when 'Services' then' Services Dept' end from emptable;

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

delete from emptable where EMPLOYEE\_ID in ( select EMPLOYEE\_REF\_ID from incentive );

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

insert into emptable (LAST\_NAME) values ('O''Connor');

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

select LAST\_NAME from emptable where LAST\_NAME regexp '^[0-9]+$';

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

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

update incentive set column\_name = new\_value where FIRST\_NAME = "Dinesh";