SUBASH G [21EC531]

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 employee\_table;**

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

**select FIRST\_NAME, LAST\_NAME from employee\_table ;**

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

**select FIRST\_NAME as "Employee Name" from employee\_table;**

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

**select UPPER(FIRST\_NAME) from employee\_table;**

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

**select lower(FIRST\_NAME) from employee\_table;**

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

**select distinct DEPARTMENT from employee\_table;**

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

**select substring(FIRST\_NAME,1,3) from employee\_table;**

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

**select position("a" in "Ragavi") from employee\_table where FIRST\_NAME="Ragavi";**

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

**select rtrim(FIRST\_NAME) from employee\_table;**

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

**select ltrim(FIRST\_NAME) from employee\_table;**

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

**select length(FIRST\_NAME) from employee\_table;**

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

**select replace(FIRST\_NAME,"a","$") from employee\_table;**

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

**select concat(FIRST\_NAME,"\_",LAST\_NAME) from employee\_table;**

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

**select FIRST\_NAME,JOINING\_DATE from employee\_table;**

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

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

**select \* from employee\_table order by FIRST\_NAME;**

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

**select \* from employee\_table order by FIRST\_NAME desc;**

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

**select FIRST\_NAME ,SALARY from employee\_table order by FIRST\_NAME ,SALARY desc;**

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

**select \* from employee\_table where FIRST\_NAME="Dinesh";**

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

**select \* from employee\_table where FIRST\_NAME="Dinesh && Roy";**

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

**select \* from employee\_table where FIRST\_NAME not in ("Dinesh && Roy");**

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

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

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

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

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

**select \* from employee\_table 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 employee\_table 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 employee\_table where FIRST\_NAME like ("j\_\_\_");**

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

**select \* from employee\_table where SALARY >60000;**

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

**select \* from employee\_table where SALARY <80000;**

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

**select \* from employee\_table where SALARY>50000 && SALARY<80000;**

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

**select \* from employee\_table 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 employee\_table where extract(year from JOINING\_DATE)=2015;**

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

**select \* from employee\_table where extract(month from JOINING\_DATE)=01;**

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

**select \* from employee\_table where JOINING\_DATE < "2017-01-01";**

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

**select \* from employee\_table where JOINING\_DATE > "2016-01-31";**

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

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

**select microsecond(JOINING\_DATE) from employee\_table;**

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

**38. Get database date**

**select now();**

**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 employee\_table where LAST\_NAME like '%\%%';**

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

**select replace(LAST\_NAME,'%',' ') FROM employee\_table;**

**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 employee\_table 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 employee\_table 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 employee\_table 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) AvgSalary from employee\_table group by DEPARTMENT order by AvgSalary asc;**

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

**select DEPARTMENT,max(SALARY) MaxSalary from employee\_table group by DEPARTMENT order by MaxSalary asc;**

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

**select DEPARTMENT,min(SALARY) MinSalary from employee\_table group by DEPARTMENT order by MinSalary asc;**

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

**select year (JOINING\_DATE)Join\_Year,month (JOINING\_DATE) Join\_Month,count(\*) Total\_Emp from employee\_table group by year(JOINING\_DATE), month(JOINING\_DATE);**

**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 employee\_table 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 FIRST\_NAME,INCENTIVE\_AMOUNT from employee\_table a inner join incentives B on A.EMPLOYEE\_ID = B.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 FIRST\_NAME,INCENTIVE\_AMOUNT from employee\_table a inner join incentives B on A.EMPLOYEE\_ID = B.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 FIRST\_NAME,INCENTIVE\_AMOUNT from employee\_table a left join incentivesB on A.EMPLOYEE\_ID = B.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,IFNULL(INCENTIVE\_AMOUNT,0) from employee\_table a left join incentives B on A.EMPLOYEE\_ID = B.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,IFNULL(INCENTIVE\_AMOUNT,0) from employee\_table a right join incentives B on A.EMPLOYEE\_ID = B.EMPLOYEE\_REF\_ID;**

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

**select DEPARTMENT,(select IFNULL(max(INCENTIVE\_AMOUNT),0) from INCENTIVES where EMPLOYEE\_REF\_ID= EMPLOYEE\_ID) Max\_incentive from employee\_table;**

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

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

**select \* from employee\_table order by salary desc limit 2;**

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

**select \* from employee\_table order by SALARY desc limit N;**

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

**select min(SALARY) from (select \* from employee\_table order by salary desc limit 2) a;**

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

**select min(SALARY) from (select \* from employee\_table order by SALARY desc limit N) a;**

**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 employee\_table union select LAST\_NAME from employee\_table;  
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 \* from employee\_table where exists (select \* from INCENTIVES);**

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

**select \* from employee\_table where EMPLOYEE\_ID > 2 ; select \* from EMPLOYEE where EMPLOYEE\_ID < 4;**

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

**Select EMPLOYEE\_ID from employee\_table 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 "John" THEN SALARY \* 2;**

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

**SELECT case DEPARTMENT when 'Banking' then 'Bank Dept' when 'Insurance' then 'Insurance Dept' when 'Services' then 'Services Dept' end FROM employee\_table;**

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

**delete from employee\_table where EMPLOYEE\_ID in (select EMPLOYEE\_REF\_ID from incentives);**

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

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

**select \*from employee\_table where lower(LAST\_NAME)=upper(LAST\_NAME);**

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

**Insert into employee\_table (LAST\_NAME) values ('Test''');**

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

**UPDATE incentives SET INCENTIVE\_AMOUNT='9000'WHERE EMPLOYEE\_REF\_ID= (SELECT EMPLOYEE\_ID FROM employee\_table WHERE FIRST\_NAME="Dinesh" );**