

Aggregate Functions MCQs

1. Observe the given SQL query and choose the correct option.

```
SELECT branch_name, COUNT (DISTINCT customer_name)
FROM depositor, account
WHERE depositor.account_number = account.account_number
GROUP BY branch_id
```

- a) The query is syntactically correct but gives the wrong answer
- b) The query is syntactically wrong
- c) The query is syntactically correct and gives the correct answer
- d) The query contains one or more wrongly named clauses.

Ans is a

2. We apply the aggregate function to a group of sets of attributes using the _____ clause.

a) group by

b) group

Ans is a

c) group set

The screenshot shows a web-based data analytics tool interface. At the top, it says 'Untitled Report' and 'Harish Chandra'. Below this, there's a 'Query 1' tab with a SQL query editor. The query is:
1 -- Returns first 100 rows from sql_for_business_analytics.employees_1
2 SELECT
3 distinct(UPPER(department_name)) as Department_In_UpperCase_And_Number_of_Departemnt
4 FROM sql_for_business_analytics.employees_1 LIMIT 100;
A green 'Run' button is visible, and a status message says 'Succeeded in 457ms'. Below the query editor, there's a 'Data' tab showing the results of the query. The results are displayed in a table with one column: 'department in uppercase and number of departement'. The table has four rows: 1 RECRUITMENT, 2 MEATS, 3 EXECUTIVE, and 4 STORE MANAGEMENT. On the right side, there's a 'Mode Public Warehouse (everyone)' dropdown and a list of tables including 'sql_for_business_analytics.employees_1'. Below that, there's a table schema for 'employees_1' with columns: city_name (string), department_name (string), job_title (string), store_name (number), gender_short (string), gender_full (string), status_year (string), and business_unit (string).

d) group attribute

3.The ____ aggregation operation adds up all the values of the attribute

a) add

b) avg

c) max

d) sum

Ans is d

4. State true or false: Any attribute which is present in the having clause without being aggregated must not be present in the group by clause.

a) True

b) False

Ans is a

Jgjhg

5. What values does the count(*) function ignore?

a) Repetitive values

b) Null values

c) Characters

d) Integers

Ans is b

Use the dataset sql_for_business_analytics.employees_1

1) Write a SQL query to fetch the departments in upper case , then show the number of departments.

SELECT

**distinct(UPPER(department_name)) as Department_In_UpperCase_And_Number_of_Departement
FROM sql_for_business_analytics.employees_1 LIMIT 100;**

```
SELECT branch_name, COUNT (DISTINCT customer_name) FROM depositor, account  
WHERE depositor.account_number = account.account_number GROUP BY branch_id
```

2) Find the maximum service length

```
SELECT MAX(length of service) AS Maximum Service Length FROM  
sql_for_business_analytics.employees_1;
```

The screenshot shows a web-based data analytics tool. At the top, the user is logged in as 'Harish Chandra' and is working on an 'Untitled Report'. The interface includes a sidebar with 'Report Builder' and 'Add Notebook' options. The main area displays a SQL query in a dark-themed editor:

```
1 SELECT
2 MAX(length_of_service) as Maximum_Service_Lenght
3 FROM sql_for_business_analytics.employees_1 LIMIT 100;
```

Below the query editor, the results are shown in a table with the following data:

maximum service lenght
1

On the right side, there is a 'Mode Public Warehouse (everyone)' dropdown and a list of tables including 'sql_for_business_analytics.employees_1'. Below that, a table schema for 'employees_1' is displayed, listing columns like 'city_name', 'department_name', 'job_title', 'store_name', 'gender_short', 'gender_full', 'status_year', and 'business_unit' with their respective data types.

```
SELECT
MAX(length_of_service) as Maximum_Service_Lenght
FROM sql_for_business_analytics.employees_1 LIMIT 100;
```

3) Find the number of employees belonging to each unique city.

```
Select COUNT(DISTINCT (city_name, employee_id))
FROM sql_for_business_analytics.employees_1;
```

```
SELECT city name, COUNT(*) AS Number of Employees FROM
sql_for_business_analytics.employees_1 GROUP BY city_name;
```

The screenshot shows a web-based data analytics tool. At the top, the user is logged in as 'Harish Chandra' and is viewing an 'Untitled Report'. The interface includes a sidebar with options like 'Report Builder' and 'Add Notebook'. The main area displays a SQL query in a dark-themed editor:

```
1 Select COUNT(DISTINCT (city_name, employee_id))
2 FROM sql_for_business_analytics.employees_1;
```

Below the query editor, a table shows the results of the query:

Data	Fields	Source
1	count	14

At the bottom of the interface, there is a status bar indicating 'Showing rows 1-1 of 1', 'Columns 1', 'Size 88', and 'Run a few seconds ago'. A right-hand sidebar shows a list of database tables and views, including 'tutorial', 'aapl_historical_stock_price', 'accounts', and various 'animal_crossing' tables.

4) Find the minimum and maximum age at which an employee was terminated.

```
SELECT Year
MIN(age) as minimum_age ,MAX(age) as maximum_age
FROM sql_for_business_analytics.employees_1
WHERE employee are 'terminated'
GROUP BY year
ORDER BY YEAR
```

```
SELECT MIN(age) AS Minimum_Age_Terminated, MAX(age) AS
Maximum_Age_Terminated FROM sql_for_business_analytics.employees_1 WHERE
employment_status = 'terminated';
```

5) Calculate the average service length and find those employees whose service length is greater than average.

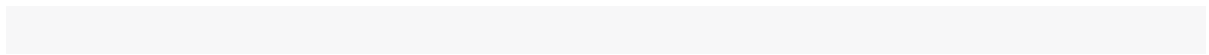
SELECT

FROM

WHERE

SELECT AVG

FROM



The screenshot shows a web-based data analytics tool. At the top, the user is logged in as 'Harish Chandra' and is viewing an 'Untitled Report'. The interface includes a sidebar with options like 'Report Builder' and 'Add Notebook'. The main area displays a SQL query in a dark-themed editor:

```
1 Select
2 AVG(length_of_service) as avg
3 FROM sql_for_business_analytics.employees_1
4 GROUP BY employee_id
5 HAVING employee_id > avg(length_of_service);
6
```

Below the query editor, a 'Data' table shows the results of the query. The table has two columns: 'avg' and 'employee_id'. The data is as follows:

	avg	employee_id
1	21.5	
2	21.5	
3	21.5	
4	21.5	
5	21.5	
6	21.5	
7	21.5	
8	21.5	

On the right side of the interface, there is a search bar and a list of tables under the 'tutorial' schema, including 'aapl_historical_stock_price', 'accounts', 'animal_crossing_achievements', 'animal_crossing_art', 'animal_crossing_bags', 'animal_crossing_bottoms', and 'animal_crossing_construction'. The 'employees_1' table is selected, and its schema is displayed below, showing fields like 'age', 'birthdate_key', 'business_unit', 'city_name', 'department_name', 'employee_id', 'gender_full', and 'gender_short'.

SELECT

AVG (length_of_services) AS Average

FROM sql_for_business_analytics.employees_1

GROUP BY employee_id

HAVING employee_id > AVG (length_of_services);

