Integrated project: Maji Ndogo part 1 [MCQ] (Version : 0)

TEST

Correct Answer

Answered in 58.5 Minutes

Question 1/10

What is the address of Bello Azibo?

- [ ] 100 Mogadishu Road
- [ ] 119 Moroni Avenue
- [ ] 51 Addis Ababa Road
- [x] 129 Ziwa La Kioo Road

Explanation:

We can either search employees manually or use 'Bello Azibo' and the WHERE clause:

```
SELECT address
FROM employee
WHERE employee_name = 'Bello Azibo';
```

Question 2/10

What is the name and phone number of our Microbiologist?

- [x] Vuyisile Ghadir, +99712584936
- [ ] Usafi Bahir, +99234156789

- [ ] Vuyisile Ghadir, +99317854629
- [ ] Jengo Tumaini, +99712584936

Explanation:

We can simply use a SELECT statement with WHERE:

```
SELECT employee_name, phone_number
FROM employee
WHERE position = 'Micro Biologist';
```

Question 3/10

What is the source_id of the water source shared by the most number of people? Hint: Use a comparison operator.

- [ ] AkRu04862224
- [ ] AmAs10911224
- [x] AkRu05603224
- [ ] AkHa00036224

Explanation:

With our given experience and the hint given, we can either use > with some number to hone in on the answer:

```
SELECT *
FROM water_source
WHERE number_of_people_served > 3997;
```

or sort the list to find the top record:

```
SELECT *
FROM water_source
ORDER BY number_of_people_served DESC;
```

Question 4/10

What is the population of Maji Ndogo?

Hint: Start by searching the data_dictionary table for the word 'population'.

- [x] 27.6 million people
- [ ] 27,628.1 people
- [ ] 146 million people
- [ ] 29.8 million people

Explanation:

Searching the data_dictionary for:

```
SELECT *
FROM data_dictionary WHERE description LIKE
'%population%' ;
```

Gives:

table_name	column_name	description
global_water_access	**pop_n**	**The national population size estimate in thousands**
global_water_access	pop_u	The urban population share estimate in percentage points (%)

From this we get the following information:

1. The population is in column pop_n.
2. It is in the global_water_access table.
3. The unit is in the thousands.

Searching the global_water_access table:

```
SELECT *
FROM global_water_access
WHERE name = 'Maji Ndogo';
```

Question 5/10

Which SQL query returns records of employees who are**Civil Engineers** residing in **Dahabu** or living on an avenue?

- [ ]
```
SELECT *
FROM employee
WHERE position = 'Civil Engineer' AND
(province_name = 'Dahabu' OR address =
'Avenue');
```

- [x]
```
SELECT *
FROM employee
WHERE position = 'Civil Engineer' AND
(province_name = 'Dahabu' OR address
LIKE '%Avenue%');
```

- [ ]
```
SELECT *
FROM employee
WHERE (position = 'Civil Engineer' AND
province_name = 'Dahabu') OR address
LIKE '%Avenue%';
```

- [ ]
```
SELECT *
FROM employee
WHERE position = 'Civil Engineer' AND
province_name = 'Dahabu' OR address
LIKE '%Avenue%';
```

Explanation:

The order of operations will influence the output.

The option that doesn't include brackets is incorrect because it will include employees with positions other than 'Civil Engineer' as well. The option that includes the bracket before position and after 'Dahabu' is incorrect because it will similarly include employees with other positions. The option without %, indicating a wildcard, will return nothing and is therefore incorrect.

Question 6/10

Create a query to identify potentially suspicious field workers based on an anonymous tip. This is the description we are given:

- The employee's phone number contained the digits 86 or 11.
- The employee's last name started with either an A or an M.
- The employee was a Field Surveyor.

Which option is correct?

- [x] Bello Azibo and Zuriel Matembo both fit this description.
- [ ] Four employees fit this description.
- [ ] Only Bello Azibo fits this description.
- [ ] Only Zuriel Matembo fits this description.

Explanation:

Using the correct operators and brackets will provide the correct answer:

```
SELECT employee_name
FROM employee
WHERE
   (phone_number LIKE '%86%'
   OR phone_number LIKE '%11%')
   AND (employee_name LIKE '% A%'
   OR employee_name LIKE '% M%')
   AND position = 'Field Surveyor';
```

Without the brackets, four employees will be found to match this description. Incorrectly applying the brackets, many employees will be found to match this description.

Question 7/10

What is the result of the following query? Choose the most appropriate description of the results set.

```
SELECT *
FROM well_pollution
WHERE description LIKE 'Clean_%' OR results = 'Clean' AND biological < 0.01;
```

- [ ] 4916 records are returned. This query describes the pollution samples that were classified as 'Clean' but were actually contaminated.

- [x] 0 records are returned. This query describes the pollution samples that were classified as 'Clean' but were actually contaminated.

- [ ] 4916 records are returned. This query describes the pollution samples that had an insignificant amount of biological contamination.

- [ ] 4954 records are returned. This query describes the pollution samples that had an insignificant amount of biological contamination.

Explanation:

'4954 records' are incorrect because the changes made in **5. Pollution Issues** were not made, adding those records to the total rows.

'0 records' are incorrect because… This is the result of running the query we used to check the incorrect labels in message 13:13. The conditions in this question are reversed.

The statements that refer to 'classified as ‘Clean’ but were actually contaminated' are incorrect because this query describes the pollution samples where query conditions are reversed. Looking for biological < 0.01 means we’re looking for records below the threshold of 0.01, meaning there is an insignificant amount of biological contamination in these samples. Check message 12:31 for more details.

Question 8/10

Which query will identify the records with a quality score of 10, visited more than once?

- [ ] SELECT * FROM water_quality WHERE visit_count >= 2 AND subjective_quality_score = 10

- [ ] SELECT * FROM water_quality WHERE visit_count = 2 OR

subjective_quality_score = 10

- [x] SELECT * FROM water_quality WHERE visit_count = 2 AND subjective_quality_score = 10
- [ ] SELECT * FROM water_quality WHERE visit_count > 1 AND subjective_quality_score > 10

Explanation:

The query that 'visit_count > 2 AND subjective_quality_score = 10' is incorrect because the AND operator will limit the result set to visit count larger than two, excluding two.

The query with 'visit_count = 2 AND subjective_quality_score = 10' is incorrect because the AND operator will limit the result set to visit count equals to two, excluding 3,4,5…

The query with 'visit_count > 1 AND subjective_quality_score > 10', while visit_count > 1 is correct, 'subjective_quality_score > 10' will always be false since there are no scores above 10.

Question 9/10

You have been given a task to correct the phone number for the employee named 'Bello Azibo'. The correct number is +99643864786. Write the SQL query to accomplish this. Note: Running these queries on the employee table may create issues later, so use the knowledge you have learned to avoid that.

- [x] UPDATE employee SET phone_number = '+99643864786' WHERE employee_name = 'Bello Azibo';
- [ ] UPDATE employee SET phone_number = '+99643864786' WHERE name = 'Bello Azibo';
- [ ] UPDATE employee SET phone_number = '+99643864786';

UPDATE employee
SET phone_number = +99643864786
WHERE employee_name = 'Bello Azibo';

Explanation:

The option that includes UPDATE, SET, and WHERE, quotation marks on the number, and uses employee_name is correct. If the phone number is not wrapped in quotation marks, it will result in a syntax error.

If the WHERE clause is not used, this number will be set for all employee records rather than just for the single employee. If the column 'name' rather than 'employee_name' is used, we are referring to a non-existent column.

Question 10/10

How many rows of data are returned for the following query?

```
SELECT *
FROM well_pollution
WHERE description
IN ('Parasite: Cryptosporidium', 'biologically contaminated')
OR (results = 'Clean' AND biological > 0.01);
```

- [ ] 750 rows
- [ ] 5486 rows
- [x] 634 rows
- [ ] 570 rows

Explanation:

'634 rows' is incorrect because the changes made to the well_pollution table were not successful. Either the updates were not made, or the well_pollution_copy table was updated, and not well_pollution.

'0 rows' and '750 rows' are false options.