

Concept Quiz:

Assignment - Basic Query Form... x Database Management Essential... x DBMS - Google Docs x Concept Quiz for Module 4 | Cou... x Assignment - Basic Query Form... x + Minimize x

← → ↻ coursera.org/learn/database-management/exam/XegCS/concept-quiz-for-module-4/attempt

← Back **Concept Quiz for Module 4** Graded Quiz • 1h • 20 total points Due Apr 30, 11:59 PM IST

1. What is a column expression? 1 point

- ☐ a table or column name
- ☐ a combination of conditions and logical operators that produces a True/False value
- ☒ a combination of constants, column names, functions, and operators that produces a value
- ☐ an alias for a table name in the FROM clause

2. The conceptual evaluation process indicates that 1 point

- ☒ row operations occur before group operations.
- ☐ row operations occur after group operations.
- ☐ row operations occur intermixed with group operations.
- ☐ row operations and group operations never occur in the same SELECT statement.

3. COUNT(*) calculates 1 point

- ☒ the count of rows in the result.
- ☐ the count of duplicate primary key values in the result.

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← Back **Concept Quiz for Module 4** Graded Quiz • 1h • 20 total points Due Apr 30, 11:59 PM IST

4. The difference between COUNT(<ColumnName>) and COUNT(DISTINCT <ColumnName>) is 1 point

- ☐ COUNT(<ColumnName>) ignores null values but COUNT(DISTINCT <ColumnName>) includes null values.
- ☐ COUNT(<ColumnName>) ignores duplicate values but COUNT(DISTINCT <ColumnName>) includes duplicate values.
- ☒ COUNT(<ColumnName>) includes duplicate values but COUNT(DISTINCT <ColumnName>) ignores duplicate values.
- ☐ no difference.

5. Indicate components of the cross product join style in a SELECT statement. This question allows multiple answers. 1 point

- ☒ A list of tables in the FROM clause
- ☐ The INNER JOIN and ON keywords in the FROM clause
- ☐ The INNER JOIN and ON keywords in the WHERE clause
- ☒ Join conditions in the WHERE clause

6. What formats are allowable for date formats in PostgreSQL? This question allows multiple answers. 1 point

- ☐ 'ddd-YYYY' such as '365-2022'
- ☒ 'dd-Mon-YYYY' such as '01-Jan-2022'

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← Back **Concept Quiz for Module 4** Graded Quiz • 1h • 20 total points Due Apr 30, 11:59 PM IST

6. What formats are allowable for date formats in PostgreSQL? This question allows multiple answers. 1 point

- ☐ 'ddd-YYYY' such as '365-2022'
- ☒ 'dd-Mon-YYYY' such as '01-Jan-2022'
- ☒ 'yyyy-mm-dd' such as '2022-01-01'
- ☐ 'YYYY-ddd' such as '2022-365'

7. For complex problems involving joins and grouping, you can decompose a SELECT statement by 1 point

- ☐ executing grouping operations alone without row operations.
- ☒ executing row operations alone without group operations.
- ☐ executing row and group operations together in the same statement.
- ☐ executing grouping conditions alone without row conditions.

8. What is the relationship between the GROUP BY and HAVING clauses? 1 point

- ☐ A GROUP BY clause must be followed by HAVING clause.
- ☒ A HAVING clause must be preceded by a GROUP BY clause.
- ☐ A HAVING clause is necessary when GROUP BY contains more than one grouping column.
- ☐ The GROUP BY and HAVING clauses are independent.

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← Back **Concept Quiz for Module 4** Graded Quiz • 1h • 20 total points Due Apr 30, 11:59 PM IST

9. A condition involving an aggregate function must be placed in the HAVING clause. 1 point

- ☒ True
- ☐ False

10. Grouping in a SELECT statement only occurs one time. 1 point

- ☒ True
- ☐ False

11. How is a condition involving inexact text matching specified? 1 point

- ☐ ~ operator with meta characters in a pattern
- ☒ LIKE operator with meta characters in a pattern
- ☐ LIKE operator without meta characters in a pattern
- ☐ Any comparison operator with meta characters in a pattern

12. Indicate components of the join operator style in a SELECT statement. 1 point

- ☐ tables in the FROM clause
- ☒ the INNER JOIN and ON keywords in the FROM clause

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← Back **Concept Quiz for Module 4** Graded Quiz • 1h • 20 total points Due Apr 30, 11:59 PM IST

12. Indicate components of the join operator style in a SELECT statement. 1 point

- ☐ tables in the FROM clause
- ☒ the INNER JOIN and ON keywords in the FROM clause
- ☐ the INNER JOIN and ON keywords in the WHERE clause
- ☐ join conditions in the WHERE clause

13. When mixing the logical AND and OR operators in the WHERE clause, you should 1 point

- ☐ place them on separate lines.
- ☐ always list the AND conditions before listing the OR conditions.
- ☐ always list the OR conditions before listing the AND conditions.
- ☒ always use parentheses to clarify the order of evaluation.

14. Name qualification is required if more than one table in a SELECT statement contains the same column name referenced in the statement. 1 point

- ☒ True
- ☐ False

15. What are the requirements of the natural join operator? This question allows multiple answers.

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← Back **Concept Quiz for Module 4** Graded Quiz • 1h • 20 total points Due Apr 30, 11:59 PM IST

15. What are the requirements of the natural join operator? This question allows multiple answers. 1 point

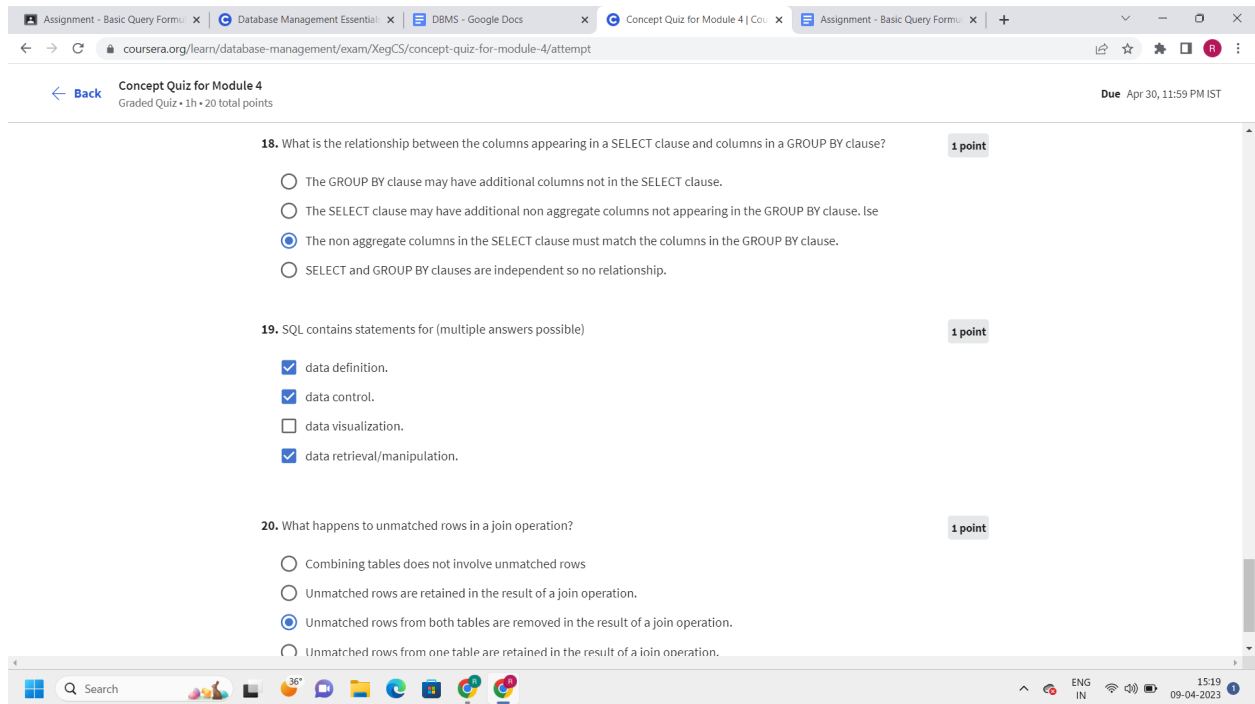
- ☒ Equality (=) matching condition
- ☒ Tables must have the same number of columns
- ☒ Remove one join column in the result
- ☐ Join columns with the same unqualified names

16. A SELECT statement with an aggregate function in the result and no GROUP BY clause (no grouping columns) generates 1 point

- ☐ always zero rows.
- ☐ more than one row.
- ☐ a syntax error because it is missing the GROUP BY clause.
- ☒ at most one row.

17. A condition not involving an aggregate function can be placed in the WHERE or HAVING clauses. 1 point

- ☐ True
- ☒ False



Module 4 Assignment:

1. List the city, state, and zip codes in the customer table. Your result should not have duplicates.

```
SELECT DISTINCT city, state, zip  
FROM CUSTOMER;
```

2. List the name, department, phone number, and email address of employees with a phone number beginning with "3-".

```
SELECT empname, department, phone, email FROM employee  
WHERE phone LIKE '3-%';
```

3. List all columns of the resource table with a rate between \$10 and \$20. Sort the result by rate.

```
SELECT * FROM resourcetbl  
WHERE rate BETWEEN 10 AND 20  
ORDER BY rate;
```

4. List the event requests with a status of “Approved” or “Denied” and an authorized date in July 2022. Include the event number, authorization date, and status in the output.

```
SELECT eventno, dateauth, status
FROM eventrequest
WHERE dateauth BETWEEN '01-Jul-2022' AND '31-Jul-2022'
AND status IN ('Approved', 'Denied');
```

5. List the location number and name of locations that are part of the “Basketball arena”. Your WHERE clause should not have a condition involving the facility number compared to a constant (“F101”). Instead, you should use a condition on the FacName column for the value of “Basketball arena”.

```
SELECT location.locno, locname
FROM facility, location
WHERE facname = 'Basketball arena'
AND facility.facno = location.facno;
```

6. For each event plan, list the plan number, count of the event plan lines, and sum of the number of resources assigned. For example, plan number P100 has 4 lines and 7 resources assigned. You only need to consider event plans that have at least one line.

```
SELECT planno, COUNT(*) AS "Number of Lines", SUM(resourcecnt) AS "Resource Sum"
FROM eventplanline
GROUP BY planno;
```

7. For each event plan with a time start in October 2022, list the plan number, count of the event plan lines, and sum of the number of resources assigned. For example, plan number P100 has 4 lines and 7 resources assigned. The result should only contain event plans that have sum of resources of 10 or more. For conditions on columns containing both date and time details, you should include both the date and time for conditions testing end of day.

```
SELECT planno, COUNT(*) AS "Number of Lines", SUM(resourcecnt) AS "Resource Sum"
```

```
FROM eventplanline
WHERE TimeStart BETWEEN '01-Oct-2022' AND TO_DATE('31-Oct-2022 23:59',
'DD-Mon-YYYY HH24:MI')
GROUP BY planno
HAVING SUM(resourcecnt) >= 10;
```