

SQL DATABASE FUNDAMENTALS (345)

REGIONAL 2020

Multiple Choice:

Multiple Choice (50 @ 10 points each) _____ (500 points)

TOTAL POINTS _____ (***500 points***)

Failure to adhere to any of the following rules will result in disqualification:

- 1. Contestant must hand in this test booklet and all printouts. Failure to do so will result in disqualification.**
- 2. No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests or facsimile (handwritten, photocopied, or keyed) are allowed in the testing area.**
- 3. Electronic devices will be monitored according to ACT standards.**

No more than sixty (60) minutes testing time

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General Instructions

Your name and/or school name should *not* appear on any work you submit for grading. Write your contestant number in the provided space. Staple all pages in order before you turn in your test.

Assumptions to make when taking this assessment:

Unless specified otherwise, questions are in the context of database systems of the Relational/SQL type database family/genre

MULTIPLE CHOICE

Identify the letter of the choice that best completes the statement or answers the question. Mark A if the statement is true. Mark B if the statement is false.

1. Which SQL statement is used to retrieve data from a database?
 - a. Get
 - b. Pull
 - c. Select
 - d. Obtain

2. Which SQL statement is used to modify existing rows in a database table?
 - a. Update
 - b. Where
 - c. Amend
 - d. Insert

3. Which SQL statement is used to remove rows from a database table?
 - a. Remove
 - b. Cancel
 - c. Unpublish
 - d. Delete

4. Which SQL statement is used to add rows into a database table?
 - a. Put
 - b. Insert
 - c. Add
 - d. AddRow

5. The acronym DDL stands for
 - a. Database Dynamic Language
 - b. Data Definition Language
 - c. Data Dynamic Linear
 - d. Database Definition Linear

6. The acronym DML stands for
 - a. Database Manipulation Languages
 - b. Data Markup Language
 - c. Data Manipulation Language
 - d. Data Markup Linear

7. RDMS stands for which of the following?
 - a. Relationship Data Manipulation System
 - b. Relationship Data Management Series
 - c. Relational Database Management System
 - d. Relational Database Manipulation Series

8. ETL stands for which of the following?
 - a. Extract, Transform, Load
 - b. Extract, Terraform, Load
 - c. Extract, Table, Load
 - d. Extract, Transform, Lag

9. Which range of values defines INT?
 - a. Integer data from 0 to 255
 - b. Integer data from -32,768 to 32,767
 - c. Integer data from -8,388,608 to 8,388,607
 - d. Integer data from -2,147,483,648 to 2,147,483,647

10. How do you retrieve all the rows and columns from a table named Cities?
 - a. GET * FROM Cities;
 - b. SELECT * FROM Cities;
 - c. PULL ALL FROM Cities;
 - d. OBTAIN ALL FROM Cities;

11. Which of the following SQL statements will return the FirstName and LastName columns for all rows from a table called Customers?
 - a. GET FirstName and LastName FROM Customers;
 - b. PULL FirstName, LastName FROM Customers;
 - c. OBTAIN FirstName and LastName FROM Customers;
 - d. SELECT FirstName, LastName FROM Customers;

12. Which of the following is ***not*** true for a Primary Key?
 - a. It uniquely identifies each record in a database table
 - b. It can contain NULL values
 - c. A table may have a maximum of one primary key
 - d. It cannot contain NULL values

13. A _____ enforces that all of a column's values must match existing values from the column it references.
 - a. Foreign Key Constraint
 - b. Check Constraint
 - c. Fact Constraint
 - d. Candidate Constraint

14. Which of the following joins selects records with *matching* values in *both* tables?
- Left Join
 - Right Join
 - Inner Join
 - Cross Join
15. Which of the following joins selects all records from the left table and the matched records from the right table?
- Left Join
 - Right Join
 - Cross Join
 - Inner Join
16. Which of the following SQL statements removes the table called Products?
- DROP TABLE Products;
 - REMOVE TABLE Products;
 - DELETE TABLE Products;
 - DESC TABLE Products;
17. A _____ SQL statement is used to generate a SQL table?
- Add Table
 - Put Table
 - Generate Table
 - Create Table
18. Which of the following is used to modify the structure of a table?
- Alter Table
 - Update Table
 - Modify Table
 - Expand Table
19. A _____ is a data structure that organizes information into rows and columns.
- Table
 - Foreign Key
 - Field
 - Attribute
20. A table column is also considered to be an attribute.
- True
 - False

21. The acronym CRUD stands for
 - a. Create, Remove, Update, and Delete
 - b. Create, Read, Update, and Delete
 - c. Create, Render, Update, and Delete
 - d. Construct, Read, Update, and Delete

22. The acronym CAP stands for
 - a. Concurrent, Atomicity, and Partition Tolerance
 - b. Concurrent, Availability, and Partition Tolerance
 - c. Consistency, Atomicity, and Partition Tolerance
 - d. Consistency, Availability, and Partition Tolerance

23. The acronym ACID stands for
 - a. Addition, Creation, Insertion, and Deletion
 - b. Atomicity, Consistency, Isolation, and Durability
 - c. Atomicity, Creation, Isolation, and Deletion
 - d. Addition, Consistency, Isolation, and Durability

24. Most major RDMS providers do *not* implement ACID principles?
 - a. True
 - b. False

25. Which of the following SQL statements is used to erase all data changes made from the start of the current transaction?
 - a. Undo
 - b. Modify
 - c. Unpublish
 - d. Rollback

26. Which of the following SQL statements is used to end your current transaction and make permanent changes performed in the transaction?
 - a. Publish
 - b. Commit
 - c. Save
 - d. Update

27. _____ requires concurrent transactions must leave the database in a status as if they were executed sequentially.
 - a. Consistency
 - b. Atomicity
 - c. Partition Tolerance
 - d. Isolation

28. _____ ensures each record in a table is uniquely identified.
- Entity integrity
 - Referential integrity
 - Foreign key integrity
 - Database integrity
29. Which of the below SQL keywords is used to sort a result set in ascending or descending order?
- Sort By
 - Group By
 - Order By
 - Select By
30. Which of the below SQL statements will filter down to FirstName starting with B and containing only 2 total characters?
- WHERE FirstName LIKE 'B%'
 - WHERE FirstName LIKE 'B_'
 - WHERE FirstName LIKE 'B*'
 - WHERE FirstName LIKE 'B%%'
31. Which of the below SQL statements will filter to records with FruitName values containing Orange, Apple, or Pineapple
- WHERE EXISTS FruitName ('Orange', 'Apple', 'Pineapple')
 - WHERE FruitName CONTAINS ('Orange', 'Apple', 'Pineapple')
 - WHERE FruitName NOT IN ('Orange', 'Apple', 'Pineapple')
 - WHERE FruitName IN ('Orange', 'Apple', 'Pineapple')
32. In SQL Server, which SQL command is used to limit the number of records returned by a query result set to a specified number of rows?
- Top
 - Includes
 - Limit
 - Precludes
33. A _____ is a virtual table with contents based on the result-set of a SQL statement.
- Table
 - Stored procedure
 - Function
 - View

34. Which of the following SQL commands is used to add a SQL database?
- ADD DATABASE
 - GENERATE DATABASE
 - APPEND DATABASE
 - CREATE DATABASE
35. Which of the following SQL statements is used to generate an index for a table?
- APPEND INDEX
 - GENERATE INDEX
 - ADD INDEX
 - CREATE INDEX
36. _____ is an example of DDL?
- CREATE
 - SELECT
 - INSERT
 - REVOKE
37. _____ is an example of DML?
- CREATE
 - ALTER
 - UPDATE
 - GRANT
38. A _____ is often used to enforce entity integrity within a table.
- Foreign key
 - Primary key
 - Check key
 - Type key
39. The acronym SQL stands for
- Standard Query Loop
 - Structured Query Language
 - Striped Query Language
 - Structured Quantum Language
40. The acronym 3NF stands for
- Three Normal Forms
 - Three Notable Forms
 - Third Normal Form
 - Third form of normalization

41. ANSI stands for which of the following?
- Alphanumeric National Standards Institute
 - Alphabetic and Numeric Standards Institute
 - American National Syntax Institution
 - American National Standards Institute
42. Which of the following is a set of programming extensions from Sybase and Microsoft that adds features to the SQL available in SQL Server?
- PL/SQL
 - Transact-SQL
 - C#
 - VB.Net
43. Which of the following database systems is *not* a RDBMS?
- Neo4j
 - Postgres
 - MariaDB
 - Oracle
44. Which SQL statement filters rows from a table named Cities to just rows whose CityName starts with B?
- WHERE CityName = 'B';
 - WHERE CityName LIKE 'B*';
 - WHERE CityName LIKE 'B%';
 - WHERE CityName IS LIKE 'B*';
45. The DELETE statement may be used in conjunction with the WHERE statement?
- True
 - False
46. A Primary Key may contain only one column?
- True
 - False
47. Which of the following SQL statements adds a Primary Key constraint for column ClientID when used within a CREATE TABLE statement?
- CONSTRAINT PK_Client PRIMARYKEY (ClientID)
 - CONSTRAINT PK_Client PRIMARY KEY (ClientID)
 - CONSTRAINT PK_Client CANDIDATEKEY (ClientID)
 - CHECK PK_Client PRIMARYKEY (ClientID)

48. A _____ is a unique identifier not derived from application data and that has no business meaning. For example, the first five values might be 1, 2, 3, 4, 5.
- Surrogate key
 - Natural key
 - Select Key
 - Dimension Key
49. RANK is an example of a _____ function
- Window
 - Trigger
 - User-defined
 - Procedure
50. Postgres, SQL Server, and MySQL each have a DATE datatype?
- True
 - False