

SQL DATABASE FUNDAMENTALS (345)

REGIONAL – 2018

Multiple Choice:

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

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

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- 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.**
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No more than sixty (60) minutes testing time

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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 of the following SQL commands would you use to identify all of the non-duplicate values for a table column?
 - a. UNIQUE
 - b. DIFF
 - c. DISTINCT
 - d. COMPARE

2. A SQL JOIN clause is used to combine data from two or more tables using on a common field between them.
 - a. True
 - b. False

3. Which operator is *true* if the operand matches a pattern?
 - a. BETWEEN
 - b. LIKE
 - c. IN
 - d. None of the above

4. Which of the following is *not* a valid SQL clause?
 - a. TOP
 - b. ORDER BY
 - c. WHERE
 - d. BOTTOM

5. Which SQL function would you use to obtain the number of rows that match specified criteria?
 - a. TOTAL
 - b. COUNT
 - c. AGGREGATE
 - d. SUM

6. The DEFAULT constraint is used to insert a default value into a column.
 - a. True
 - b. False

7. All of the following are *true* statements regarding the “AS” keyword, *except*?
 - a. Applies a permanent alias
 - b. Applies a temporary alias
 - c. Allows renaming of database columns
 - d. Allows renaming of database tables

8. RDBMS is the basis for SQL.
 - a. True
 - b. False

9. Which of the following would you use to add a new record to a database table?
 - a. CREATE ROW
 - b. ADD ROW
 - c. UPDATE TABLE
 - d. INSERT INTO

10. Which of the following is a *valid* SQL constraint?
 - a. LIMIT
 - b. UNIQUE
 - c. DISTINCT
 - d. UNION

11. Which of the following accurately depicts that a value must be present in the EMAIL column for a record (assume this is part of a CREATE statement)?
 - a. EMAIL VARCHAR (255) NOT NULL
 - b. EMAIL VARCHAR (255) REQUIRE
 - c. EMAIL VARCHAR (255) INDEX
 - d. EMAIL VARCHAR (255) NOT BLANK

12. All of the following are situations you would *avoid* using a database index, *except*?
 - a. Tables that frequently have large batch updates.
 - b. Columns that are frequently manipulated.
 - c. Columns that contain a high number of NULL values.
 - d. Tables that have large data sets.

13. Which logical operator compares a value to similar values using wildcard operators?
 - a. IN
 - b. LIKE
 - c. COMPARE
 - d. RELATE

14. Which of the following are *valid* Data Definition Language (DDL) commands?
 - a. CREATE
 - b. DROP
 - c. ALTER
 - d. All of the above

15. What category of data integrity ensures there are no duplicate rows in a table?
 - a. Domain Integrity
 - b. Entity Integrity
 - c. Referential Integrity
 - d. User Defined Integrity

16. Deleting a table definition including all data, indexes, triggers, constraints, and permission for that table is accomplished using which command?
- DELETE
 - DROP
 - TRUNCATE
 - REMOVE
17. A Foreign Key in one table points to a Domestic Key in another table.
- True
 - False
18. What would be the result of executing the following SQL statement?
- ```
UPDATE Members
SET Email='john.smith@bpa.org', State='Michigan'
```
- Only the record for John Smith in the Members table would be updated.
  - All records in the Members table would be updated.
  - The values in the Email and State columns would be the same for all records in the Members table.
  - Both B and C.
19. Relational databases offer what advantages in comparison to a flat file?
- Increased integrity
  - Data redundancy
  - Reduced complexity
  - Both A and B
20. In which of the following would the results *include* displaying the Last Name from A to Z?
- SELECT \* FROM Customers ORDER BY First\_Name ASC, Last Name DESC
  - SELECT \* FROM Customers ORDER BY OrderID ASC, Last Name ASC
  - SELECT \* FROM Customers ORDER BY Last Name DESC, OrderID ASC
  - SELECT \* FROM Customers ORDER BY Last Name DESC, First\_Name ASC
21. Which type of JOIN results in the selection of all rows from two tables as long as there is a match between the columns in each tables?
- FULL OUTER JOIN
  - UNION
  - RIGHT JOIN
  - INNER JOIN
22. All of the following are aggregate functions, *except* \_\_\_\_\_.
- RAND
  - COUNT
  - MAX
  - AVG

23. In SQL syntax AVG and avg have different meanings.
- True
  - False
24. Of the following data types, in which one could you *not* store the value 123456789?
- VARCHAR(20)
  - INT
  - NCHAR
  - The value can be stored in all of the above datatypes
25. The SQL statement ALTER TABLE CUSTOMERS ADD DATEOFBIRTH VCHAR(20) results in which of the following?
- Adds a new column named DATEOFBIRTH to the CUSTOMERS table
  - Adds a new table named DATEOFBIRTH to the CUSTOMERS database
  - Adds a new row named DATEOFBIRTH to the CUSTOMERS table
  - None of the Above
26. The clause WHERE ACCOUNTNUM LIKE '\_5%3' will match all of the following, *except* \_\_\_\_\_.
- 2533483
  - 45434
  - 85103
  - 953
27. The modulus or remainder of dividing two values can be found using which operator?
- #
  - \*
  - %
  - /
28. To access a database View, a user must have permission to \_\_\_\_\_.
- all tables
  - the View
  - only the tables the view references
  - Both B and C
29. In which SQL clause will the results include any rows where an employee is over age 25 that have a salary more than \$40,000 or employees that have a salary of at least \$35,000?
- WHERE (AGE > 25 AND SALARY > 40000) AND SALARY > 35000
  - WHERE (AGE > 25 AND SALARY > 40000) OR SALARY < = 35000
  - WHERE (AGE > 25 AND SALARY > 40000) OR SALARY > = 35000
  - WHERE AGE > 25 AND (SALARY > = 40000 OR SALARY > = 35000)

30. A secured database object has a fully qualified name. Which of the following is *not* part of the fully qualified name?
- Schema
  - Object
  - Principal
  - Server
31. Which of the following statements about Primary Keys is *not* accurate?
- A table may have more than one Primary Key
  - Is not required for a table to have a Primary Key
  - A Primary Key must be unique
  - A Primary Key cannot be NULL
32. What statement would you use to copy data from one table and insert it into an existing table?
- COPY TO SELECT
  - INSERT INTO SELECT
  - ALTER TABLE INSERT
  - INSERT AND UPDATE TABLE
33. Which statement is *true* about the AUTO\_INCREMENT keyword?
- Allows a unique number to be generated when a new record is inserted into a table
  - Must always start at 1
  - Must always be the primary key
  - Both A and C
34. A SQL CHECK constraint \_\_\_\_\_.
- prevents any action that would destroy links between tables
  - limits the values that can be entered in a column
  - prevents entry of numerical values in a column
  - guarantees uniqueness for a column
35. Which type of constraint is used to insert a default value into a column?
- UNIQUE
  - DEFAULT
  - NOT NULL
  - STANDARD
36. There are three parameters for the SQL MID() function.,. Which of the following is *not* required?
- Column name
  - Start
  - Length
  - All parameters are required

37. Examples of SQL Scalar functions include all of the following, *except* \_\_\_\_\_.
- a. ROUND()
  - b. LEN()
  - c. FORMAT()
  - d. SUM()
38. The maximum number of characters for a SQL Server VARCHAR() column is \_\_\_\_\_.
- a. 255
  - b. 1024
  - c. 8000
  - d. 32,767
39. CRUD =
- a. Create, Relate, Update, Delete
  - b. Create, Relate, Upload, Data
  - c. Create, Read, Update, Delete
  - d. Create, Read, Update, Data
40. Constraints can only be applied at the time a table is created?
- a. True
  - b. False
41. In the example below, does the SELECT clause has a computed value?  
SELECT CustomerName, UnitPrice \* NumberofUnits FROM Orders
- a. True
  - b. False
42. Which of the following SQL statements *deletes* all rows in table called CustomerOrders?
- a. DELETE CustomerOrders
  - b. DELETE \* FROM CustomerOrders
  - c. DELETE ALL CustomerOrders
  - d. DELETE FROM CustomerOrders
43. What will be the result of the following SQL statement?  
SELECT LEFT('Enjoy the little things', 5)
- a. Enjoy
  - b. things
  - c. the little things
  - d. Nothing, an error will occur
44. Which of the following SQL clauses is used to *sort* a result set?
- a. SORT
  - b. ORDER BY
  - c. ARRANGE
  - d. SORT ORDER

45. The WHERE clause is required for a SQL UPDATE statement.
- True
  - False
46. Which keyword selects all rows from both tables as long as there is a match between the columns in both tables?
- LEFT JOIN
  - RIGHT JOIN
  - INNER JOIN
  - FULL OUTER JOIN
47. The Boolean data type stores TRUE or FALSE values.
- True
  - False
48. Creating database queries is part of the Data Definition Language.
- True
  - False
49. Which of the following is *not* a valid format for the DATEPART function?
- ns
  - qq
  - dy
  - mh
50. The following SQL statement demonstrates an example of \_\_\_\_\_.

```
SELECT a.studentid, a.name, b.gpa
FROM student a, grades b
WHERE a.studentid = b.studentid AND b.gpa >
(SELECT gpa
FROM grades
WHERE studentid = 'G1023');
```

- Intersect
- Sub query
- Array
- Constraint