Contestant Number:

Time:

Rank:

SQL DATABASE

FUNDAMENTALS-PILOT (345)

REGIONAL – 2015

**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 60 minutes testing time

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*Workplace Skills Assessment Program* competition.

**Mark on the Scantron scoring sheet the letter of the answer that best answers the question or completes/describes the statement. Mark A if the statement is true. Mark B if the statement is false. (10 pts. each). If you finish before the end of the 60 minutes testing, notify the proctor. Time may be a factor in determining the winner of the event of a tie.**

1. What acronym refers to all of the major functions that are implemented in relational database applications?
   1. Atomize, Create, Insert, Delete (ACID)
   2. Optimize, Persist, Commit (OPC)
   3. Create, Persist, Commit, Implement (CPCI)
   4. Create, Read, Update, Delete (CRUD)
2. In database terminology, a data file consisting of  [plain text](http://en.wikipedia.org/wiki/Plain_text)  or binary data is referred to as a:
   1. Two dimensional file
   2. One dimensional file
   3. Flat file
   4. Text data file
3. A relational database is:
   1. A single table containing all the data
   2. A database that does not incorporate the table/key model
   3. Uses the BASE system (basically available, soft-state, eventually consistent)
   4. A collection of data items organized as a set of formally-described tables from which data can be accessed
4. An RDBMS includes:
   1. Support the use of Data Manipulation Language
   2. Support the use of Structured Query Language
   3. The ability to enforce constraints
   4. All of the above
5. The advantage(s) of an RDBMS:
   1. Concurrent data access
   2. Increased data integrity
   3. a and b
   4. None of the above
6. A table is:
   1. A collection of rows and tuples
   2. A collection of rows, columns and relationships
   3. A collection of rows and columns
   4. A data structure that enables supporting class types
7. A table column in common database terminology is also referred to as a(n):
   1. Tuple
   2. Field
   3. Ionic
   4. Doric
8. Each table in a database must have:
   1. An ID field
   2. At least one record
   3. Boyce-Codd Normal Form applied
   4. A unique name
9. Which of the following is *not*consistent with good database design?
   1. Embrace data redundancy as a cross check
   2. Consider the current network, operating system, and software being used, including software that will interface with the database
   3. Database user requirements or user expectations
   4. Need for data to interface across multiple operating systems or be available to other programs
10. The informal definition of the database term “attribute” is:
    1. Column
    2. Domain
    3. a and b
    4. None of the above
11. The definition of a Domain is:
    1. A normalized set of tables
    2. The possible values of an attribute, i.e. column
    3. The possible values of an attribute, i.e. row
    4. A collection of records
12. The domain of a database is the set of legal values that can be assigned to an attribute.
    1. True
    2. False
13. Domain integrity is defined by:
    1. The data type and the length
    2. The NULL value acceptance
    3. The allowable values, through techniques like constraints or rules
    4. All of the above
14. Which of the following is inconsistent with Domain information?
    1. Data type
    2. Bitwise constraints
    3. Default value if any
    4. Length
15. A primary key must be:
    1. A value that will never change
    2. Composed of at least two fields
    3. A value that is likely to be null
    4. A numeric field that increments automatically
16. A foreign key:
    1. Is a [field](http://en.wikipedia.org/wiki/Field_(computer_science)) (or collection of fields) in one [table](http://en.wikipedia.org/wiki/Table_(database)) that uniquely identifies a row of another table
    2. Cannot consist of a collection of fields
    3. Establishes relationships between two databases
    4. Must follow rules established in the data definition language for the database
17. A foreign key constraint:
    1. Does not have to be linked only to a primary key constraint in another table
    2. Can also be defined to reference the columns of a UNIQUE constraint in another table
    3. All of the above
    4. None of the above apply
18. Which of the following does *not* apply to primary keys?
    1. Creating a primary key automatically creates a corresponding unique, clustered or nonclustered index
    2. All columns defined within a PRIMARY KEY constraint must be defined as NOT NULL
    3. A table can contain only one PRIMARY KEY constraint
    4. All of the above apply to primary keys
19. Which of the following is *not* a category of data integrity:
    1. Entity integrity
    2. Domain integrity
    3. Tuple integrity
    4. User-defined integrity
20. Foreign key constraints ensure:
    1. Entity integrity
    2. Domain integrity
    3. Referential integrity
    4. Transaction integrity
21. Referential Integrity:
    1. States that you may not add a record to the table that contains the foreign key unless there is a corresponding record in the linked table
    2. Ensures that relationships between tables remain consistent
    3. a and b are correct
    4. None of the above are correct
22. Which of the following is *not* included in Referential Integrity logic:
    1. Cascaded update
    2. Restricted update
    3. Cascaded Implementation
    4. Restricted Delete
23. Orphaned records are caused by:
    1. Inserting a child record when no corresponding parent record exists
    2. Deleting a parent record, leaving the corresponding child records intact
    3. Changing a parent record’s primary key value, so that the child records foreign
    4. All of the above
24. Characteristics of constraints with reference to database consist of the following *except*:
    1. Constraints let you define the way the Database Engine automatically enforces the integrity of a database
    2. Constraints define rules regarding the values allowed in columns
    3. Constraints are standard mechanism for enforcing integrity
    4. All of the above are characteristics of constraints
25. Constraints use existing indexes where possible, rather than creating new ones.
    1. True
    2. False
26. Using constraints is preferred to using [DML Triggers](http://technet.microsoft.com/en-us/library/ms191524(v=sql.105).aspx), [rules](http://technet.microsoft.com/en-us/library/ms187615(v=sql.105).aspx), and [defaults](http://technet.microsoft.com/en-us/library/ms187083(v=sql.105).aspx).
    1. True
    2. False
27. Which of the following is a characteristic of data types:
    1. Within a table, every field must have an assigned data type
    2. A fields data type defines the possible range of values a field can contain
    3. a and b are true
    4. None of the above pertain to data types
28. A fields data type does *not* control the way in which values are stored in memory
    1. True
    2. False
29. Which range of values defines tinyint:
    1. Integer data from 0 through 143
    2. Integer data from 0 through 144
    3. Integer data from 0 through 255
    4. Integer data from 0 through 256

1. Which of the following is *not* a valid data type?
   1. bigint
   2. ntext
   3. bigmoney
   4. nvarchar
2. Approximate data types include which of the following:
   1. Float
   2. Double
   3. Real
   4. a and c are approximate data types
3. The acronym GUID stands for Global User ID
   1. True
   2. False
4. A GUID is a unique 128-[bit](http://www.webopedia.com/TERM/B/bit.html) number that is produced by the Windows [OS](http://www.webopedia.com/TERM/O/operating_system.html) or by some Windows [applications](http://www.webopedia.com/TERM/A/application.html) to identify a particular component, application, file, [database](http://www.webopedia.com/TERM/D/database.html) entry, and/or user.
   1. True
   2. False
5. What is *not* true about a GUID?
   1. A Web site may generate a GUID and assign it to a user's [browser](http://www.webopedia.com/TERM/B/browser.html) to record and track the session
   2. A GUID can be used in a Windows registry to identify [COM](http://www.webopedia.com/TERM/C/COM.html) [DLLs](http://www.webopedia.com/TERM/D/DLL.html)
   3. Windows also identifies user accounts by a username (computer/domain and username) and assigns it a GUID
   4. GUIDs are not used as primary key values in databases
6. Which is *not* true when selecting appropriate data types for keys:
   1. Primary key fields must never contain NULL values
   2. Primary key values cannot have alpha data
   3. Avoid using fields that may have repeat values
   4. Primary key values cannot be changed
7. SQL commands are generally grouped into four categories. Which of the following is *not* a category of SQL commands:
   1. DDL (Data Definition Language)
   2. DAL (Data Abstraction Language
   3. DML (Data Manipulation Language)
   4. DCL (Data Control Language)
8. A data definition language (DDL) is a computer language used to create and modify the structure of database objects in a database. These database objects include, but are not limited to views, schemas, tables, indexes, etc.
   1. True
   2. False
9. The ALTER command can be used to do the following ***except***:
   1. Change the data type of columns involved in a database table
   2. Add an additional column
   3. Drop existing columns
   4. The ALTER command can do all of the above
10. There are no syntax errors or format errors in the following CREATE statement for MS SQL:  CREATE TABLE Employee (Employee Id INTEGER PRIMARY KEY, First name CHAR (50) NULL, Last name CHAR (75) NOT NULL)
    1. True
    2. False
11. Which statement correctly renames the database EMP to EMPLOYEES:
    1. MODIFY DATABASE NAME emp TO employees
    2. ALTER DATABASE NAME emp TO employees
    3. CHANGE DATABASE MODIFY NAME emp TO employees
    4. ALTER DATABASE emp MODIFY NAME = employees
12. A database can be dropped regardless of its state.
    1. True
    2. False
13. Which of the following is true regarding database schemas:
    1. Refers to the layout of the database
    2. Is considered as the graphic model of a [database](http://www.databaseguides.com/what-is-a-database)
    3. Is stored in a data dictionary
    4. All of the above are true
14. The data dictionary, in [database management systems](http://www.webopedia.com/TERM/D/database_management_system_DBMS.html), is a [file](http://www.webopedia.com/TERM/F/file.html) that defines the basic organization of a [database](http://www.webopedia.com/TERM/D/database.html).
    1. True
    2. False
15. In MS SQL, the correct format for the DROP index statement is:
    1. DROP INDEX index\_name ON table\_name
    2. DROP INDEX table\_name.index\_name
    3. DROP INDEX index\_name
    4. ALTER TABLE table\_name DROP INDEX index\_name
16. In order to create a table named “customers” with a primary key named “custID”, use the following MS SQL syntax (assume several more fields):
    1. CREATE TABLE customers (custID INT NOT NULL PRIMARY KEY,)
    2. CREATE TABLE NAME=customers (custID INT NOT NULL PRIMARY KEY,)
    3. CREATE TABLE customers (PRIMARY KEY =custID INT NOT NULL ,)
    4. CREATE TABLE NAME=customers (PRIMARY KEY =custID INT NOT NULL ,)
17. In MS SQL the parameter added to a field in order to auto increment that field is:
    1. INCREMENT 1
    2. AUTO\_INC
    3. IDENTITY
    4. None of the above is a correct parameter
18. You want to add a foreign constraint referencing a table named OrdDetail to the below CREATE TABLE statement. Which MS SQL clause will syntactically accomplish this task?

CREATE TABLE Orders  
(  
O\_Id int NOT NULL PRIMARY KEY,  
OrderNo int NOT NULL

)

* 1. ordNum int FOREIGN KEY ordDetail(ordNum)
  2. ordNum int REFERENCES FOREIGN KEY ordDetail(ordNum)
  3. ordNum int FOREIGN KEY REFERENCES ordDetail(ordNum)
  4. ordNum int CREATE FOREIGN KEY ordDetail(ordNum)

1. Any column(s) that can guarantee uniqueness is called a candidate key.
   1. True
   2. False
2. What does the SQL code in the following SQL clause define?

PRIMARY KEY (zipCode, PhoneNum)

* 1. A primary key and a foreign key
  2. Two candidate keys that form one primary key
  3. A composite key
  4. The syntax is incorrect and is meaningless

1. The following code is syntactically correct:

ALTER TABLE Orders

DROP fk\_PerOrders CONSTRAINT

* 1. True
  2. False