**Question 1**

1. Each table is perceived as a \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | two-dimensional structure |
|  |  | linked structure |
|  |  | three-dimensional structure |
|  |  | graph |

2 points

**Question 2**

1. Another word for the term "relation" is \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | data query |
|  |  | data index |
|  |  | datafile |
|  |  | table |

2 points

**Question 3**

1. The logical view of the relational database is facilitated by the  
   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | objects defined by the database wizard |
|  |  | file system used by the operating system |
|  |  | creation of data relationships based on a construct known as a table |
|  |  | creation of queries using the database wizard |

2 points

**Question 4**

1. A field that consists of values on which you can perform arithmetic  
   operations is a \_\_\_\_\_\_\_\_ type field.

|  |  |  |
| --- | --- | --- |
|  |  | Numeric |
|  |  | Yes/No |
|  |  | Memo |
|  |  | Date/Time |

2 points

**Question 5**

1. Data are classified according to their format and function and  
   consist of \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | Numeric and Logical |
|  |  | Numeric and Character |
|  |  | Numeric, Character, and Date |
|  |  | Numeric, Character, Date, and Logical |

2 points

**Question 6**

1. Each table must have a \_\_\_\_\_\_\_\_ key.

|  |  |  |
| --- | --- | --- |
|  |  | secondary |
|  |  | primary |
|  |  | logical |
|  |  | foreign |

2 points

**Question 7**

1. The key's role is based on a concept known as \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | uniqueness |
|  |  | consistency |
|  |  | availability |
|  |  | determination |

2 points

**Question 8**

1. In the context of a database table, the statement "A determines B"   
   indicates that \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | even if you know the value of attribute A you cannot look up the value of attribute B |
|  |  | if you know the value of attribute B you can look up the value of attribute A |
|  |  | you do not need to know the value of attribute A in order to look up the value of attribute B |
|  |  | if you know the value of attribute A you can look up the value of attribute B |

2 points

**Question 9**

1. Date attributes contain calendar dates stored in a special format  
   known as the \_\_\_\_\_\_\_\_ date format.

|  |  |  |
| --- | --- | --- |
|  |  | Jamesian |
|  |  | Augustan |
|  |  | Gregorian |
|  |  | Julian |

2 points

**Question 10**

1. A primary key that consists of more than one attribute is called a \_\_\_\_\_\_\_\_ key.

|  |  |  |
| --- | --- | --- |
|  |  | group |
|  |  | foreign |
|  |  | composite |
|  |  | secondary |

2 points

**Question 11**

1. A multi-attribute key is known as a \_\_\_\_\_\_\_\_ key.

|  |  |  |
| --- | --- | --- |
|  |  | foreign |
|  |  | primary |
|  |  | super |
|  |  | composite |

2 points

**Question 12**

1. A superkey is any key that uniquely identifies each \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | object |
|  |  | row |
|  |  | domain |
|  |  | table |

2 points

**Question 13**

1. Within a table, each primary key value \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | is a minimal superkey |
|  |  | must be unique |
|  |  | is always the first field in each table |
|  |  | must be numeric |

2 points

**Question 14**

1. A \_\_\_\_\_\_\_\_ functionally determines all of the row's attributes.

|  |  |  |
| --- | --- | --- |
|  |  | superkey |
|  |  | primary key |
|  |  | combined key |
|  |  | foreign key |

2 points

**Question 15**

1. Within a table, the primary key must be unique so that it will  
   identify each row. When this is the case, the table is said to   
   exhibit \_\_\_\_\_\_\_\_ integrity.

|  |  |  |
| --- | --- | --- |
|  |  | enforced |
|  |  | referential |
|  |  | key |
|  |  | entity |

2 points

**Question 16**

1. A null value is created or represented by \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | pressing the Enter key without making a prior entry of any kind |
|  |  | entering a value |
|  |  | a space |
|  |  | a zero |

2 points

**Question 17**

1. Nulls, if used improperly, can create problems because they can  
   represent \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | a default value |
|  |  | a known, but missing, attribute value |
|  |  | zero |
|  |  | an unsortable value |

2 points

**Question 18**

1. A table can be logically connected to another table by defining a \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | primary key |
|  |  | hyperlink |
|  |  | superkey |
|  |  | common attribute |

2 points

**Question 19**

1. In sophisticated application development software, nulls can create   
   problems when using functions  
   such as: 1. COUNT -- 2. SUM -- 3. AVERAGE

|  |  |  |
| --- | --- | --- |
|  |  | 1 only |
|  |  | 2 only |
|  |  | 1 & 3 only |
|  |  | 1, 2 and 3 |

2 points

**Question 20**

1. We can describe a link by observing that a \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | primary key of one table appears again as a foreign key in a related table |
|  |  | primary key of one table appears again as a primary key in a related  table |
|  |  | foreign key of one table appears again as a foreign key in a related table |
|  |  | foreign key of one table appears again as a secondary key in a related table |

2 points

**Question 21**

1. In a relationship, when a primary key from one table is also defined  
   in a second table, the field is referred to as a \_\_\_\_\_\_\_\_ in the  
   second table.

|  |  |  |
| --- | --- | --- |
|  |  | redundant field |
|  |  | combined key |
|  |  | primary key |
|  |  | foreign key |

2 points

**Question 22**

1. If a foreign key contains either matching values or nulls, the   
   table(s) that make use of such a foreign key is/are said to exhibit  
   \_\_\_\_\_\_\_\_ integrity.

|  |  |  |
| --- | --- | --- |
|  |  | restrictive |
|  |  | referential |
|  |  | redundant |
|  |  | secondary |

2 points

**Question 23**

1. A \_\_\_\_\_\_\_\_ key is defined as a key that is used strictly for data   
   retrieval purposes.

|  |  |  |
| --- | --- | --- |
|  |  | secondary |
|  |  | data |
|  |  | primary |
|  |  | foreign |

2 points

**Question 24**

1. A \_\_\_\_\_\_\_\_ key's effectiveness in narrowing down a search depends   
   on how restrictive it is.

|  |  |  |
| --- | --- | --- |
|  |  | foreign |
|  |  | search |
|  |  | primary |
|  |  | secondary |

2 points

**Question 25**

1. Which of the following is true of the entity integrity rule?

|  |  |  |
| --- | --- | --- |
|  |  | All primary key entries must be unique. |
|  |  | Foreign key values cannot reference primary key values. |
|  |  | Duplicate object values are allowed. |
|  |  | A part of the key may be null. |

2 points

**Question 26**

1. The referential integrity rule requires that \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | it makes it possible to delete a row in one table whose primary key  does not have a matching foreign ey value in another table |
|  |  | it makes it possible for an attribute to have a corresponding value |
|  |  | every null foreign key value must reference an existing primary key value |
|  |  | every non-null foreign key value must reference an existing primary  key value |

2 points

**Question 27**

1. A superkey that does not contain a subset of attributes that is   
   itself a superkey is called a \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | superkey |
|  |  | candidate key |
|  |  | secondary key |
|  |  | primary key |

2 points

**Question 28**

1. An attribute (or combination of attributes) that uniquely identifies   
   each entity in a table is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | candidate key |
|  |  | secondary key |
|  |  | superkey |
|  |  | primary key |

2 points

**Question 29**

1. A candidate key that does not have a null value and is selected to   
   uniquely identify all other attribute values in any given row is   
   called a \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | primary key |
|  |  | secondary key |
|  |  | candidate key |
|  |  | superkey |

2 points

**Question 30**

1. A relational operator that yields all rows in one table that are   
   not found in the other table is the \_\_\_\_\_\_\_\_ operator.

|  |  |  |
| --- | --- | --- |
|  |  | union |
|  |  | intersect |
|  |  | product |
|  |  | difference |

2 points

**Question 31**

1. A relational operator that yields values from all rows found in a   
   table is known as the \_\_\_\_\_\_\_\_ operator.

|  |  |  |
| --- | --- | --- |
|  |  | product |
|  |  | difference |
|  |  | select |
|  |  | project |

2 points

**Question 32**

1. A relational operator that yields all possible pairs of rows from   
   two tables is known as the \_\_\_\_\_\_\_\_ operator.

|  |  |  |
| --- | --- | --- |
|  |  | difference |
|  |  | intersect |
|  |  | product |
|  |  | union |

2 points

**Question 33**

1. A relational operator that yields all values for selected attributes  
   is known as the \_\_\_\_\_\_\_\_ operator.

|  |  |  |
| --- | --- | --- |
|  |  | difference |
|  |  | product |
|  |  | project |
|  |  | select |

2 points

**Question 34**

1. A relational operator that allows for the combination of   
   information from two or more tables is known as the \_\_\_\_\_\_\_\_   
   operator.

|  |  |  |
| --- | --- | --- |
|  |  | project |
|  |  | difference |
|  |  | select |
|  |  | join |

2 points

**Question 35**

1. A(n) \_\_\_\_\_\_\_\_ links tables by selecting only the rows with common   
   values in their common attribute(s).

|  |  |  |
| --- | --- | --- |
|  |  | equijoin |
|  |  | natural join |
|  |  | foreign join |
|  |  | outer join |

2 points

**Question 36**

1. A(n) \_\_\_\_\_\_\_\_ links tables on the basis of an equality condition   
   that compares specified columns of each table.

|  |  |  |
| --- | --- | --- |
|  |  | right outer join |
|  |  | left outer join |
|  |  | natural join |
|  |  | equijoin |

2 points

**Question 37**

1. \_\_\_\_\_\_\_\_ are especially useful when you are trying to determine   
   what value(s) in related tables cause(s) referential integrity  
   problems.

|  |  |  |
| --- | --- | --- |
|  |  | Outer joins |
|  |  | Inner joins |
|  |  | Natural joins |
|  |  | Equijoins |

2 points

**Question 38**

1. The \_\_\_\_\_\_\_\_ provides a detailed description of all tables found   
   within the user/designer-created database.

|  |  |  |
| --- | --- | --- |
|  |  | data dictionary |
|  |  | data set |
|  |  | primary key |
|  |  | index |

2 points

**Question 39**

1. In a database context, a(n) \_\_\_\_\_\_\_\_ is the opposite of a homonym   
   and indicates the use of different names to describe the same   
   attribute.

|  |  |  |
| --- | --- | --- |
|  |  | system catalog |
|  |  | synonym |
|  |  | entity |
|  |  | join |

2 points

**Question 40**

1. The \_\_\_\_\_\_\_\_ can be described as a detailed system data dictionary   
   that describes all objects within the database, including data   
   about table names, the table's creator and creation date, the  
   number of columns in each table, the data type corresponding to   
   each column, index filenames, index creators, authorized users, and  
   access privileges.

|  |  |  |
| --- | --- | --- |
|  |  | system catalog |
|  |  | index |
|  |  | data dictionary |
|  |  | relational structure |

2 points

**Question 41**

1. The one-to-many (1:M) relationship is easily implemented in the   
   relational model by putting the primary key of the "1" side in the  
   table of the "many" side as a \_\_\_\_\_\_\_\_ key.

|  |  |  |
| --- | --- | --- |
|  |  | natural |
|  |  | foreign |
|  |  | composite |
|  |  | join |

2 points

**Question 42**

1. The use of a(n) \_\_\_\_\_\_\_\_ relationship ensures that two entity sets   
   are not placed in the same table when they should not be.

|  |  |  |
| --- | --- | --- |
|  |  | 1:1 |
|  |  | 1:M |
|  |  | M:1 |
|  |  | M:N |

2 points

**Question 43**

1. The problems inherent in the many-to-many (M:N) relationship can   
   easily be avoided by creating a \_\_\_\_\_\_\_\_ entity.

|  |  |  |
| --- | --- | --- |
|  |  | composite |
|  |  | related |
|  |  | linking |
|  |  | foreign |

2 points

**Question 44**

1. A \_\_\_\_\_\_\_\_ table is the implementation of a composite entity.

|  |  |  |
| --- | --- | --- |
|  |  | composite |
|  |  | foreign |
|  |  | joined |
|  |  | linking |

2 points

**Question 45**

1. The relational database makes it possible to control data   
   redundancies by using common attributes that are shared by tables,  
   called \_\_\_\_\_\_\_\_ keys.

|  |  |  |
| --- | --- | --- |
|  |  | shared |
|  |  | composite |
|  |  | primary |
|  |  | foreign |

2 points

**Question 46**

1. A(n) \_\_\_\_\_\_\_\_ is an orderly arrangement used to logically access   
   rows in a table.

|  |  |  |
| --- | --- | --- |
|  |  | index |
|  |  | entity |
|  |  | key |
|  |  | join |

2 points

**Question 47**

1. A \_\_\_\_\_\_\_\_ index is an index in which the index key can have only   
   one pointer value (row) associated with it.

|  |  |  |
| --- | --- | --- |
|  |  | unique |
|  |  | key |
|  |  | foreign |
|  |  | primary |

2 points

**Question 48**

1. In 1985, Dr. E. F. Codd published a list of \_\_\_\_\_\_\_\_ rules to   
   define a relational database system.

|  |  |  |
| --- | --- | --- |
|  |  | 3 |
|  |  | 5 |
|  |  | 10 |
|  |  | 12 |

2 points

**Question 49**

1. \_\_\_\_\_\_\_\_ can be used by a DBMS to retrieve data ordered by a  
   specific attribute or attributes.

|  |  |  |
| --- | --- | --- |
|  |  | Foreign keys |
|  |  | Indexes |
|  |  | Data dictionaries |
|  |  | Unions |

2 points

**Question 50**

1. Dr. Codd's \_\_\_\_\_\_\_\_ rule is described as follows:  
   The relational database may support many languages. However it must   
   support one well-defined declarative language with support for data  
   definition, view definition, data manipulation(interactive and by  
   program), integrity constraints, authorization, and transaction   
   management (begin, commit, and rollback).

|  |  |  |
| --- | --- | --- |
|  |  | Comprehensive Data Sublanguage |
|  |  | View Updating |
|  |  | Dynamic On-Line Catalog Based on the Relational Model |
|  |  | Integrity Independence |