**Question 1**

1. Traditionally, database designers relied on \_\_\_\_\_\_\_\_ to help them develop a good design.

|  |  |  |
| --- | --- | --- |
|  |  | education |
|  |  | good judgment |
|  |  | instinct |
|  |  | experience |

2 points

**Question 2**

1. A(n) \_\_\_\_\_\_\_\_ of the overall database design is required to overcome the fact that data are viewed in different ways by different people.

|  |  |  |
| --- | --- | --- |
|  |  | analysis |
|  |  | footprint |
|  |  | blueprint |
|  |  | review |

2 points

**Question 3**

1. A CUSTOMER \_\_\_\_\_\_\_\_ would be described by attributes such as customer last name, customer first name, customer phone, customer address, and customer credit limit.

|  |  |  |
| --- | --- | --- |
|  |  | model |
|  |  | relationship |
|  |  | constraint |
|  |  | entity |

2 points

**Question 4**

1. The basic building blocks of all data models are entities, attributes, relationships, and \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | multiples |
|  |  | constraints |
|  |  | business rules |
|  |  | queries |

2 points

**Question 5**

1. What type of relationship is expressed with the phrase "Painter paints Painting"?

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

2 points

**Question 6**

1. What type of relationship is expressed with the phrase "Employee manages Store"?

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

2 points

**Question 7**

1. What type of relationship is expressed with the phrase "Student takes Class"?

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

2 points

**Question 8**

1. What is the fastest and most direct source of business rules?

|  |  |  |
| --- | --- | --- |
|  |  | a database design document |
|  |  | interviews with end users |
|  |  | company documentation |
|  |  | the Internet |

2 points

**Question 9**

1. A(n) \_\_\_\_\_\_\_\_ is a brief, precise, and unambiguous description of a policy, procedure, or principle within a specific organization.

|  |  |  |
| --- | --- | --- |
|  |  | entity |
|  |  | attribute |
|  |  | business rule |
|  |  | constraint |

2 points

**Question 10**

1. As a general rule, a noun in a business rule will translate into a(n) \_\_\_\_\_\_\_\_ in the model.

|  |  |  |
| --- | --- | --- |
|  |  | relationship |
|  |  | entity |
|  |  | attribute |
|  |  | constraint |

2 points

**Question 11**

1. The hierarchical database model is based on a \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | lack of a parent segment |
|  |  | tree structure |
|  |  | matrix |
|  |  | lack of child segment |

2 points

**Question 12**

1. The hierarchical database model depicts a set of \_\_\_\_\_\_\_\_ relationships.

|  |  |  |
| --- | --- | --- |
|  |  | many-to-many |
|  |  | one-to-many |
|  |  | many-to-one |
|  |  | one-to-one |

2 points

**Question 13**

1. A \_\_\_\_\_\_\_\_ is the equivalent of a file system's record type.

|  |  |  |
| --- | --- | --- |
|  |  | child |
|  |  | parent |
|  |  | root |
|  |  | segment |

2 points

**Question 14**

1. Which data model was developed most recently?

|  |  |  |
| --- | --- | --- |
|  |  | file system |
|  |  | relational |
|  |  | XML |
|  |  | extended relational |

2 points

**Question 15**

1. Within the network model, the \_\_\_\_\_\_\_\_ is the conceptual organization of the entire database as viewed by the database administrator.

|  |  |  |
| --- | --- | --- |
|  |  | data management language |
|  |  | subschema |
|  |  | schema |
|  |  | DBTG |

2 points

**Question 16**

1. The hierarchical model depicts a(n) \_\_\_\_\_\_\_\_ of one-to-many relationships.

|  |  |  |
| --- | --- | --- |
|  |  | DDL |
|  |  | table |
|  |  | set |
|  |  | DML |

2 points

**Question 17**

1. A relational database is a collection of \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | records |
|  |  | common fields |
|  |  | field values |
|  |  | tables |

2 points

**Question 18**

1. A relation is a matrix consisting of a series of row and column \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | intersections |
|  |  | systems |
|  |  | models |
|  |  | links |

2 points

**Question 19**

1. One of the advantages of a relational data model is \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | complex database design |
|  |  | conceptual complexity |
|  |  | easier database design |
|  |  | structural dependence |

2 points

**Question 20**

1. For most relational database software, the query language is \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | 4GL |
|  |  | RDBMS |
|  |  | String Query Language (SQL) |
|  |  | Structured Query Language (SQL) |

2 points

**Question 21**

1. From an end-user perspective, any SQL-based relational database application involves three parts: a user interface, a set of tables stored in the database, and the \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | SQL engine |
|  |  | RDBMS |
|  |  | relationships between the tables |
|  |  | business rules |

2 points

**Question 22**

1. Each row in the relational table is known as an entity \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | instance |
|  |  | relationship |
|  |  | attribute |
|  |  | model |

2 points

**Question 23**

1. How is an entity represented in an ERD?

|  |  |  |
| --- | --- | --- |
|  |  | diamond |
|  |  | triangle |
|  |  | rectangle |
|  |  | circle |

2 points

**Question 24**

1. What is the name for the most current version of the ERD?

|  |  |  |
| --- | --- | --- |
|  |  | SQL |
|  |  | Date model |
|  |  | Crow's Foot notation |
|  |  | Chen model |

2 points

**Question 25**

1. In the object-oriented data model (OODM), both data and their relationships are contained in a single structure known as a(n) \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | constraint |
|  |  | object |
|  |  | entity |
|  |  | attribute |

2 points

**Question 26**

1. The object-oriented model \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | has a simple navigational system |
|  |  | has a low system overhead that speeds transactions |
|  |  | adds semantic content |
|  |  | has no standards |

2 points

**Question 27**

1. Classes are organized as a class \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | object |
|  |  | system |
|  |  | hierarchy |
|  |  | method |

2 points

**Question 28**

1. In the OO data model, a class \_\_\_\_\_\_\_\_ represents a real-world action such as finding a selected PERSON's name.

|  |  |  |
| --- | --- | --- |
|  |  | inheritance |
|  |  | interface |
|  |  | method |
|  |  | hierarchy |

2 points

**Question 29**

1. The ERDM is primarily geared to business applications, while the OODM tends to focus on \_\_\_\_\_\_\_\_ applications.

|  |  |  |
| --- | --- | --- |
|  |  | personal |
|  |  | educational |
|  |  | very specialized engineering and scientific |
|  |  | non-commercial Internet |

2 points

**Question 30**

1. Database models can be grouped into two categories: conceptual models and \_\_\_\_\_\_\_\_ models.

|  |  |  |
| --- | --- | --- |
|  |  | query |
|  |  | implementation |
|  |  | logical |
|  |  | physical |

2 points

**Question 31**

1. In response to the increasing complexity of applications, two new data models emerged: the object-oriented data model and the \_\_\_\_\_\_\_\_ relational data model.

|  |  |  |
| --- | --- | --- |
|  |  | flat-file |
|  |  | entity |
|  |  | extended |
|  |  | hierarchical |

2 points

**Question 32**

1. What modern development gave the use of complex objects a boost?

|  |  |  |
| --- | --- | --- |
|  |  | Y2K |
|  |  | mainframes |
|  |  | the Internet |
|  |  | object-oriented programming |

2 points

**Question 33**

1. The network database models have \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | a navigational system that yields simple design |
|  |  | a great deal of structural independence |
|  |  | a simple system that promotes efficiency |
|  |  | an owner/member relationship that promotes database integrity |

2 points

**Question 34**

1. XML databases have emerged to address the need to manage \_\_\_\_\_\_\_\_ data within the native XML format.

|  |  |  |
| --- | --- | --- |
|  |  | unstructured |
|  |  | structured |
|  |  | relational |
|  |  | object-oriented |

2 points

**Question 35**

1. Data models were developed to \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | keep data within multiple data repositories |
|  |  | allow DBMSs to maintain loose control over the database activities |
|  |  | deposit data within a single file |
|  |  | model real-world objects or events |

2 points

**Question 36**

1. Which data model contains the least semantics?

|  |  |  |
| --- | --- | --- |
|  |  | object-oriented |
|  |  | network |
|  |  | relational |
|  |  | hierarchical |

2 points

**Question 37**

1. Which data model contains the most semantics?

|  |  |  |
| --- | --- | --- |
|  |  | relational |
|  |  | hierarchical |
|  |  | object-oriented |
|  |  | network |

2 points

**Question 38**

1. A way of classifying data models is by degree of \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | abstraction |
|  |  | difficulty |
|  |  | knowledge |
|  |  | unification |

2 points

**Question 39**

1. Which model represents the end users' view of the data environment?

|  |  |  |
| --- | --- | --- |
|  |  | conceptual |
|  |  | external |
|  |  | internal |
|  |  | physical |

2 points

**Question 40**

1. A specific representation of an external view is known as a(n) \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | external schema |
|  |  | relational schema |
|  |  | conceptual model |
|  |  | physical model |

2 points

**Question 41**

1. The most widely used conceptual model is the \_\_\_\_\_\_\_\_ model.

|  |  |  |
| --- | --- | --- |
|  |  | implementation |
|  |  | ER |
|  |  | OO |
|  |  | internal |

2 points

**Question 42**

1. The \_\_\_\_\_\_\_\_ model presents a global view of the entire database.

|  |  |  |
| --- | --- | --- |
|  |  | physical |
|  |  | network |
|  |  | logical |
|  |  | conceptual |

2 points

**Question 43**

1. A(n) \_\_\_\_\_\_\_\_ model is independent of both hardware and software.

|  |  |  |
| --- | --- | --- |
|  |  | logical |
|  |  | conceptual |
|  |  | external |
|  |  | developmental |

2 points

**Question 44**

1. The \_\_\_\_\_\_\_\_ model adapts a conceptual model to a specific DBMS.

|  |  |  |
| --- | --- | --- |
|  |  | internal |
|  |  | database |
|  |  | external |
|  |  | entity |

2 points

**Question 45**

1. What model requires the most detail in its internal model?

|  |  |  |
| --- | --- | --- |
|  |  | semantic |
|  |  | relational |
|  |  | network |
|  |  | entity relationship |

2 points

**Question 46**

1. Which model operates at the lowest level of abstraction?

|  |  |  |
| --- | --- | --- |
|  |  | conceptual |
|  |  | internal |
|  |  | physical |
|  |  | external |

2 points

**Question 47**

1. When you can change the physical model without affecting the internal model, you have \_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | a logical database |
|  |  | physical dependence |
|  |  | conceptual separation |
|  |  | physical independence |