Question 1: Data modeling is an iterative process.

1. True
2. False

Question 2: Information in the data dictionary is called what?

1. File silo
2. Cached information
3. Metadata
4. Compiled data
5. Data repository

Question 3: Which would NOT likely be an entity on a car insurance ERD?

1. Agent
2. Car
3. Zip code
4. Policy
5. Customer

Question 4: The three major parts of an ERD diagram are what?

1. Attribute, modularity, cardinality
2. Relationship, attribute, entity
3. Process, data flow, data store
4. Process, entity and relationship
5. Relationship, data flow, entity

Question 5: With an ERD, lines are drawn to show relationships among the data.

1. True
2. False

Question 6: A(n) _____ entity is an entity with an identifier that describes only the entity.

1. incomplete
2. intersection
3. non-identifying
4. independent
5. dependent

Question 7: A data model is a what?

1. A formal way of representing the data that are used and created by a business system
2. The mathematical model of formulas and logic used in a system
3. The model that is produced by extreme programming
4. The abstract creating of an ideal system transformation
5. The expanded, thoroughly balanced and normalized use case for a system

Question 8: ERDs are drawn in several levels: Context ERD diagrams; Level 0 ERD diagrams; Level 1 ERD

diagrams.

1. True
2. False

Question 9: In creating ERD's, which would most likely NOT be a source for entities?

1. Use cases
2. Level 0 DFD diagrams
3. Cost / benefit reports
4. Data flows
5. External entities

Question 10: A data model can do what?

1. Represent actions or processes that occur in the to-be system
2. Illustrate return-on-investment, break-even point, and economic feasibility
3. Only be used with JAD sessions
4. Only be used in BPR situations
5. Be used as a logical data model in analysis and as a physical data model in design

Question 11: With an ERD, special symbols are added to show high-level business rules.

1. True
2. False

Question 12: Relationships are associations between entities.

1. True
2. False

Question 13: The first step to building an Entity Relationship Diagram is to do what?

1. Identify data flows from the level 0 DFD diagram
2. identify the processes, data flows and data stores
3. identify the attributes for each entity
4. draw the relationships between the entities
5. identify the entities

Question 14: Jack is developing an ERD for a small dental practice office patient record system. The dental practice has three dentists, six hygienists, and many patients. A patient is always assigned to the same dentist for all appointments. In particular, he is working on the relationship between dentists and patients. Should it be which of the following?

1. 1 to 1, with a modality of null
2. 1 to many with a modality of null
3. Many to many with a modality of not null
4. Many to many with a modality of null
5. 1 to many with a modality of not null

Question 15: The three steps in creating an ERD are: (1) identify the entities; (2) identify the processes; (3) identify the relationships

1. True
2. False

Question 16: What type of process is creating an ERD?

1. User defined process
2. Iterative process
3. Well defined process
4. Sequential process
5. Process defined by five steps

Question 17: CRUD stands for create, read, update and delete and can be used to verify DFDs and ERDs.

1. True
2. False

Question 18: An ERD is a picture that shows how data and information is processed and transformed by a business system.

1. True
2. False

Question 19: On an ERD, data elements are described as singular (1:1); plurals (1:N); or didactic (M:N).

1. True
2. False

Question 20: Anthony is working on the cardinality of doctors and patients in a large urban hospital. With the large number of doctors with varying specialties and patients that may have more than one aliment, he thinks the relationship might be noted as what?

1. 1 to many
2. Many to many
3. 1 to 1
4. 1 to 2
5. Many to 1

Question 21: In adding attributes to an ERD, which of the following might NOT be a good resource for attributes?

1. The system proposal document
2. Requirements documents
3. From the CASE tool
4. Through interviews (what users need for reports and processing)
5. Data flows from DFDs

Question 22: Entities are a person, place, or thing.

1. True
2. False

Question 23: Omar has a model with 85 entities. He can do which of the following?

1. Co-validate the entities with the level 2 DFD diagrams
2. Compress these into at most seven entity grouping units
3. Group these into related subject areas
4. Sort the entities alphabetically
5. Stop – he has all entities defined

Question 24: A graphical illustration that shows the information that is created, stored, and used by a business system would be an ERD.

1. True
2. False

Question 25: Which would likely be an entity on a car insurance ERD?

1. Car
2. fire district
3. date
4. company
5. Gender

Question 26: What is true about creating an entity relationship diagram?

1. There will be at most seven entities
2. There will be at most seven relationships
3. It is an iterative process
4. Entities will have at most seven attributes
5. If you identify more than seven entities, analyze and combine until you have seven or less

Question 27: Andrew, an analyst for PaxMedia Inc., has just learned that the business rules for a system he has been working on have changed. This means wjat

1. The ERD data model will have to be put on hold while new DFD diagrams are created
2. Nothing – once the ERD data models have been drawn, they are 'frozen' for the system
3. Andrew will be reassigned to a different project that is in its beginning stages
4. The ERD components will have to be changed
5. The project will have to be scrapped and restarted

Question 28: Modality refers to which of the following?

1. The hierarchical structure that was developed in process models applied to data models
2. Whether the entity has a unique identifier (aka 'primary key') or a concatenated identifier (aka 'composite key')
3. The number of attributes generated by an entity
4. Relationships of one-to-one; one-to-many; or many-to-many
5. Whether and entity can exist with or without a related instance in the related entity

Question 29: On an ERD, data elements are grouped in a hierarchical structure that is uniquely identified by number.

1. True
2. False

Question 30: ERDs and DFDs are two techniques for data modeling.

1. True
2. False

Question 31: In an entity called STUDENT, you might find attributes of PROFESSOR-ID, Last-Name, First-Name and CLASSROOM.

1. True
2. False

Question 32: On an ERD, processes are listed alphabetically with relationship connections drawn between processes.

1. True
2. False

Question 33: One of the first places to start developing Entity Relationship Diagrams is by looking at the level 0 process models (DFD) and the use cases for data flows and data stores.

1. True
2. False

Question 34: ERD's are data modeling techniques.

1. True
2. False

Question 35: An entity relationship diagram (ERD):

1. Is an illustration of external data flows to and from a business systems
2. Is a picture that shows the information that is created, stored, and used by a business system
3. Is a high-level CASE diagram of data modeling used in business systems
4. Is a graphical display of the processes in a business system
5. Is a use-case diagram enhanced graphically to show data and process modeling

Question 36: An entity is the basic building block for a data model.

1. True
2. False

Question 37: In defining LAST-NAME in the data dictionary, we might describe it as a character field having from 1 to 15 alphabetic characters.

1. True
2. False

Question 38: Lines on an ERD diagram indicate what?

1. Relationships among the data
2. Uniqueness of data items
3. Primary keys

4. Hierarchies between processes
5. Plurality of data items

Question 39: Which would NOT likely be an attribute of an entity called "Student"?

1. Student identification number
2. Age
3. Gender
4. Class room number
5. Home phone

Question 40: Relationships are some type of information that is captured about entities.

1. True
2. False

Question 41: On an ERD, similar kinds of information are listed together and placed inside boxes called data containers.

1. True
2. False

Question 42: Relationships are drawn with lines showing cardinality and plurality.

1. True
2. False

Question 43: An entity is described by an action verb.

1. True
2. False

Question 44: An analyst can read an ERD to discover the individual pieces of information in a system and how they are organized and related to each other.

1. True
2. False

Question 45: Independent entities are what?

1. When there is only one entity for a data process model
2. When an entity can exist without the help of another entity
3. Where the entity identifier is also the primary key
4. When a child requires attributes from the parent
5. When an entity comes from an external source (aka 'external entity')

Question 46: On an ERD, data elements are listed together and place inside boxes called entities.

1. True
2. False

Question 47: In defining the data characteristics of Universal Product Codes, we might describe them as

twelve characters made up of digits – numeric only.

1. True
2. False

Question 48: Entity Relationship Diagrams show relationships between entities that are what?

1. Defined by the project sponsor
2. Outputs from JAD sessions
3. In line with the business rules and processing
4. Extensions of the process models
5. Consistent with the ACM guidelines

Question 49: With an ERD, similar kinds of information are listed together in entities.

1. True
2. False

Question 50: With an ERD, the diagrams are drawn in a sequential order – from top to bottom.

1. True
2. False

Question 51: Entities are further designed with attributes.

1. True
2. False

Question 52: Metadata is data about data.

1. True
2. False

Question 53: A data model is a formal way of representing the data that are used and created by a business system.

1. True
2. False

Question 54: You have entities of ITEM, SOLD-ITEM, SALE and PAYMENT. Which most likely is NOT a relationship?

1. ITEM is included in SOLD-ITEM
2. SALE is paid by PAYMENT
3. PAYMENT pays for ITEM
4. PAYMENT pays for SALE
5. SALE involves SOLD-ITEM

Question 55: Data models can be either logical or physical.

1. True
2. False

Question 56: ERDs can be quite complex and might have hundreds or thousands of entities.

1. True
2. False

Question 57: The last step in creating basic ERD's is to:

1. Define attributes and assign identifiers
2. Test them with users
3. Compile them with Java
4. Recognize entities
5. Identify relationships

Question 58: An ERD is a picture which shows the information that is _____ by a business system.

1. all of these
2. used
3. stored
4. created

Question 59: The three steps in creating an ERD are: (1) identify the entities; (2) identify the attributes; (3) identify the relationships

1. True
2. False

Question 60: During the analysis phase logical data models are created.

1. True
2. False

Question 61: ERDs and DFDs are two techniques for process modeling.

1. True
2. False

Question 62: An entity is which of the following?

1. Is a person, place or thing
2. Has cardinality (1:1, 1:N, or M:N)
3. Is described with a verb phrase
4. Shows if it can be null or no null
5. Is the association between two related processes

Question 63: An illustration of the transformation of data into business value is an ERD.

1. True
2. False

Question 64: During the analysis phase, analysts create programming models to represent how the business system will operate.

1. True
2. False

Question 65: The lines that connect the entities are referred to as

1. connectors
2. Data flows
3. crow's feet
4. foreign key
5. relationships

Question 66: Balance occurs between DFDs and ERDs when the data stores _____

1. Can be equated to entities on the ERD and when entities are referred to by data stores on the DFD
2. Are uniquely named
3. Are named the same as the relationships on the ERD
4. Can be compared to ERD data flows and attributes on the ERD are included in data stores on the DFD
5. Have only one input and one output flow

Question 67: A(n) _____ entity cannot exist without the presence of another entity or has an identifier that is based on another entity's attribute.

1. dependent
2. non-complying
3. independent
4. incomplete
5. variable

Question 68: One of the most commonly used techniques for data modeling is ERDs.

1. True
2. False

Question 69: In an entity called STUDENT, you might find attributes of Student-ID, Last-Name, First-Name and cell-phone.

1. True
2. False

Question 70: On an ERD, data elements are listed alphabetically with a cross listing to the processes that manipulate them.

1. True
2. False