1. Let us consider *phone\_number* ,which can take single or several values . Treating *phone\_number*as an \_\_\_\_\_\_\_\_\_ permits instructors to have several phone numbers (including zero) associated with them.  
   a) Entity  
   b) Attribute  
   c) Relation  
   d) Value

Answer: a  
Explanation: Treating a phone as an attribute *phone\_number* implies that instructors have precisely one phone number each.

1. The total participation by entities is represented in E-R diagram as  
   a) Dashed line  
   b) Double line  
   c) Double rectangle  
   d) Circle

Answer: b  
Explanation: It is used to represent the relation between several attributes.

1. Given the basic ER and relational models, which of the following is INCORRECT?  
   a) An attribute of an entity can have more than one value  
   b) An attribute of an entity can be composite  
   c) In a row of a relational table, an attribute can have more than one value  
   d) In a row of a relational table, an attribute can have exactly one value or a NULL value

Answer: c  
Explanation: It is possible to have several values for a single attribute provide it is a multi-valued attribute.

1. Which of the following indicates the maximum number of entities that can be involved in a relationship?  
   a) Minimum cardinality  
   b) Maximum cardinality  
   c) ERD  
   d) Greater Entity Count

Answer: b  
Explanation: In SQL (Structured Query Language), the term cardinality refers to the uniqueness of data values contained in a particular column (attribute) of a database table.

1. In E-R diagram generalization is represented by  
   a) Ellipse  
   b) Dashed ellipse  
   c) Rectangle  
   d) Triangle

Answer: d  
Explanation: Ellipse represents attributes, rectangle represents entity.

1. What is a relationship called when it is maintained between two entities?  
   a) Unary  
   b) Binary  
   c) Ternary  
   d) Quaternary

Answer: b  
Explanation: Binary word usually represents two attributes.

1. Which of the following is a low level operator?  
   a) Insert  
   b) Update  
   c) Delete  
   d) Directory

Answer: d  
Explanation: Directory is a low level to word on in file system.

1. Key to represent relationship between tables is called  
   a) Primary key  
   b) Secondary Key  
   c) Foreign Key  
   d) None of the mentioned

Answer: c  
Explanation: Primary key of one relation used as an attribute in another relation is called foreign key.

1. A window into a portion of a database is  
   a) Schema  
   b) View  
   c) Query  
   d) Data dictionary

Answer: b  
Explanation: View is a logical portion of a database which is needed by some users.

1. A primary key is combined with a foreign key creates  
   a) Parent-Child relation ship between the tables that connect them  
   b) Many to many relationship between the tables that connect them  
   c) Network model between the tables that connect them  
   d) None of the mentioned

Answer: a  
Explanation: Using the two relationships mother and father provides us a record of a child’s mother, even if we are not aware of the father’s identity; a null value would be required if the ternary relationship parent is used. Using binary relationship sets is preferable in this case.