1. A domain is \_\_\_\_\_\_ if elements of the domain are considered to be indivisible units.  
a) Atomic  
b) Subatomic  
c) Substructure  
d) Subset

Answer: a  
Explanation: A set of names is an example of a nonatomic value.

2. Identify the composite attributes  
a) Salary  
b) Credits  
c) Section\_id  
d) None of the mentioned

Answer: d  
Explanation: Composite attributes, such as an attribute address with component attributes street, city, state, and zip have nonatomic domains.

3. Consider the relation given below and ind the maximum normal form applicable to them

i. R(A, B) WITH productions { A --> B }

ii. R(A, B) WITH productions { B --> A }

iii. R(A, B) WITH productions {A —> B, B --> A }

iv. R(A, B, C) WITH productions {A -->B, B --> A, AB --> C }

a) i, ii and iii are in 3NF and iv is in BCNF  
b) i and ii are in BCNF and iii and iv are in 3NF  
c) All are in 3NF  
d) All are in BCNF

Answer: d  
Explanation: One of the more desirable normal forms that we can obtain is Boyce–Codd normal form (BCNF). It eliminates all redundancy that can be discovered based on functional dependencies.

4. Which one is based on multi-valued dependency:  
a) First  
b) Second  
c) Third  
d) Fourth

Answer: d  
Explanation: One of the more desirable normal forms that we can obtain is Boyce–Codd normal form (BCNF). It eliminates all redundancy that can be discovered based on functional dependencies.

5. If a relation is in BCNF, then it is also in  
a) 1 NF  
b) 2 NF  
c) 3 NF  
d) All of the mentioned

Answer: d  
Explanation: Third normal form (3NF) relaxes this constraint slightly by allowing certain nontrivial functionaldependencieswhose left side is not a superkey.

6. If every non-key attribute is functionally dependent primary key, then the relation will be in  
a) First normal form  
b) Second normal form  
c) Third form  
d) Fourth normal form

Answer: b  
Explanation: Third normal form (3NF) relaxes this constraint slightly by allowing certain nontrivial functionaldependencieswhose left side is not a superkey.

7. If an attribute of a composite key is dependent on an attribute of the other composite key, a normalization called \_\_\_\_\_ is needed.  
a) DKNF  
b) BCNF  
c) Fourth  
d) Third

Answer: b  
Explanation: BCNF eliminates all redundancy that can be discovered based on functional dependencies.

8. The term for information that describes what type of data is available in a database is:  
a) Data dictionary  
b) data repository  
c) Index data  
d) Metadata

Answer: d  
Explanation: Meta data is generally data about a data.

9. A data type that creates unique numbers for key columns in Microsoft Access is:  
a) Autonumber  
b) Boolean  
c) Sequential key  
d) Sequential number

Answer: a  
Explanation: This can be taken as a primary key.

10. A dependency exist between two columns when  
a) Together they constitute a composite key for the table  
b) Knowing the value in one column determines the value stored in another column  
c) The table is in 3NF  
d) Together they constitute a foreign key

Answer: a  
Explanation: Given a set F of functional dependencies on a schema, we can prove that certain other functional dependencies also hold on the schema.