 **Data about data is normally termed as:**  
a. Directory  
b. Data bank  
c. **Meta data**  
d. None of the above

**Explanation:**  
Metadata is information that describes the characteristics of data, such as its structure, format, or properties. It helps in understanding and managing the data effectively.

 **Network database management system uses relations to store data?**  
a. True  
b. **False**  
c. Both  
d. None

**Explanation:**  
Network database management systems use a network data model, which organizes data in a graph structure with records and links, allowing for multiple parent-child relationships. This is different from relational databases, which use relations (tables) to store data.

 **In the relational model, cardinality is termed as:**  
a. **Number of tuples**  
b. Number of attributes  
c. Number of tables  
d. Number of constraints

**Explanation:**  
In the relational model, the cardinality of a relation (table) refers to the number of tuples (rows) it contains. This is distinct from the degree, which is the number of attributes (columns).

 **Cartesian product in relational algebra is:**  
a. A unary operator  
b. **A binary operator**

**Explanation:**  
In relational algebra, the Cartesian product is a binary operator that combines two relations to produce a new relation containing all possible pairs of tuples from the two relations.

 **In the relational model, relations are termed as:**  
a. Tuples  
b. Attributes  
c. **Tables**  
d. Rows

**Explanation:**  
In the relational model, relations are represented as tables, where each row corresponds to a tuple and each column corresponds to an attribute.

 **Which one of the following is not true for a view?**  
a. View is derived from other tables  
b. View is a virtual table  
c. A view definition is permanently stored as part of the database  
d. **View never contains derived columns**

**Explanation:**  
Views in SQL can contain derived columns, which are columns that are computed from expressions involving other columns. Therefore, the statement "View never contains derived columns" is not true.

 **A data dictionary contains:**  
a. The details of all tables in the databases  
b. The details of all constraints in the database  
c. The details of all users in the database  
d. **All of the above**

**Explanation:**  
A data dictionary is a centralized repository of metadata that includes information about the database's tables, constraints, users, and other elements, providing a comprehensive overview of the database structure and contents.

 **Which of the following is a conceptual model of DBMS design?**  
a. Physical structure  
b. **Entity relationship model**  
c. Abstract Level  
d. View Level

**Explanation:**  
The entity-relationship model is a conceptual model used in database design to represent the structure of data in terms of entities and their relationships, providing a high-level view of the database.

 **Relationship between master and detail tables is established with:**  
a. Not Null constraint  
b. **Referential integrity constraint**  
c. Check constraint  
d. Unique constraint

**Explanation:**  
The relationship between master and detail tables is established using referential integrity constraints, typically through foreign keys, ensuring that records in the detail table correspond to valid records in the master table.

 **\_\_\_\_\_\_\_ is a virtual table that draws its data from the result of an SQL.**  
a. **View**  
b. Sequence  
c. Transaction  
d. None

**Explanation:**  
A view in SQL is a virtual table that is derived from the result of an SQL query. It does not store data itself but provides a way to present data from one or more tables in a specific format.

 **NoSQL databases are used mainly for handling large volume of \_\_\_\_\_\_ data.**  
a. **Unstructured**  
b. Random  
c. Sequential  
d. All of the above

**Explanation:**  
NoSQL databases are particularly suited for handling large volumes of unstructured data, such as documents, social media posts, and other data types that do not fit neatly into the structured tables of relational databases.

 **In which DB structure MongoDB falls into?**  
a. **Document DB structure**  
b. Columnar DB structure  
c. Relational DB structure  
d. All of the above

**Explanation:**  
MongoDB is a document-oriented database, which means it stores data in flexible, JSON-like documents, allowing for a dynamic schema and easy handling of unstructured data.

 **Which of the following format is supported by MongoDB?**  
a. Value-value  
b. Key-key  
c. **Key-value**  
d. All of the above

**Explanation:**  
MongoDB stores data in documents that consist of key-value pairs, where each key is a string and each value can be a variety of data types, including nested documents and arrays.

 **MongoDB uses which two legs of CAPs theorem:**  
a. Availability and partition tolerance  
b. Consistency and availability  
c. **Consistency and partition tolerance**  
d. None of the above

**Explanation:**  
According to the CAP theorem, MongoDB is typically classified as a CP (Consistency and Partition Tolerance) system. It ensures that data is consistent across nodes and can tolerate network partitions, but may sacrifice availability during such events to maintain consistency.

 **In PL/SQL, which statement execute a sequence of statements multiple times?**  
a. EXIT  
b. **LOOP**  
c. Both  
d. None

**Explanation:**  
In PL/SQL, the LOOP statement is used to execute a sequence of statements multiple times until a specified condition is met, typically using an EXIT or EXIT WHEN statement to terminate the loop.

 **Oracle predefined errors are not associated with specific error codes:**  
a. True  
b. **False**  
c. Both  
d. None

**Explanation:**  
Oracle predefined errors are associated with specific error codes, such as ORA-00001 for unique constraint violations, ORA-01403 for no data found, etc. These error codes help in identifying and handling specific error conditions in PL/SQL code.

 **Which statements are used to control a cursor variable?**  
a. OPEN  
b. FETCH  
c. CLOSE  
d. **All of the above**

**Explanation:**  
In PL/SQL, cursor variables are controlled using the OPEN statement to open the cursor, FETCH to retrieve data from it, and CLOSE to close it after use.

 **Subprograms are named PL/SQL blocks that can be called with a set of parameters:**  
a. **True**  
b. False  
c. Both  
d. None

**Explanation:**  
Subprograms in PL/SQL, such as procedures and functions, are named blocks of code that can be invoked with a set of parameters to perform specific tasks or computations.

 **You can pass parameters to procedure or functions in a PL/SQL:**  
a. **True**  
b. False  
c. Both  
d. None

**Explanation:**  
In PL/SQL, both procedures and functions can be defined with parameters, allowing them to accept input values when called.

 **Which of the following returns the current error message text?**  
a. **SQLERRM**  
b. SQLCODE  
c. Both a and b  
d. None

**Explanation:**  
In PL/SQL, SQLERRM is a function that returns the error message text associated with the most recent error, while SQLCODE returns the error code number.

 **Which of the following is handled with the help of exception handling section in a PL/SQL block:**  
a. **A runtime error**  
b. A syntax error  
c. Both  
d. None

**Explanation:**  
Exception handling in PL/SQL is designed to manage runtime errors that occur during the execution of the code, such as division by zero or accessing invalid data, not syntax errors, which are caught at compile time.

 **In which parameter mode formal parameter acts like an initialized variable?**  
a. IN  
b. OUT  
c. **IN OUT**  
d. None

**Explanation:**  
In PL/SQL, the IN OUT parameter mode allows a formal parameter to be both read and written within the subprogram. It is initialized with the value passed from the caller and can be modified, with the changes reflected back to the caller.

 **\_\_\_\_\_\_\_\_ provide a way of your program to select multiple rows of data from the database and then process each row individually.**  
a. **PL/SQL Cursors**  
b. PL/SQL Trigger  
c. PL/SQL Select  
d. PL/SQL Process

**Explanation:**  
PL/SQL cursors provide a way to select multiple rows from the database and process each row individually, allowing for row-by-row operations on the result set.

 **In PL/SQL if you don’t specify a mode for a parameter, what is the default mode?**  
a. OUT  
b. **IN**  
c. IN OUT  
d. DEFAULT

**Explanation:**  
In PL/SQL, if no mode is specified for a parameter in a procedure or function, it defaults to IN mode, which allows the parameter to be read but not modified within the subprogram.

 **The ‘||’ is an example of what function:**  
a. Integration  
b. Continuation  
c. **Concatenation**  
d. None of the above

**Explanation:**  
In SQL, the '||' operator is used for string concatenation, allowing you to combine two or more strings into a single string.

 **Which of the following is a comparison operator in SQL?**  
a. =  
b. LIKE  
c. BETWEEN  
d. **All of the above**

**Explanation:**  
In SQL, comparison operators are used to compare values and include = (equal to), LIKE (pattern matching), and BETWEEN (range checking), among others.

 **To delete a particular column in a relation the command used is:**  
a. UPDATE  
b. TRUNCATE  
c. **ALTER**  
d. DELETE

**Explanation:**  
In SQL, the ALTER TABLE command is used to modify the structure of an existing table, including deleting a particular column using the DROP COLUMN clause.

 **The \_\_\_\_\_\_\_\_\_ operator is used to compare a value to a list of literals values that have been specified.**  
a. BETWEEN  
b. **=**  
c. <=  
d. >=

**Explanation:**  
In SQL, the = operator is used to compare a value to a single literal value. For comparing to a list of literal values, the IN operator is typically used, but since it's not an option, = is the closest match for comparing to a single value.

 **The following statement: “SELECT \* FROM <table\_name> WHERE <where clause=""> GROUP BY <columns> HAVING <having clause="">”:</having></columns></where>**  
a. Is Selection operation  
b. Is Projection operation  
c. Is Join operation  
d. **None**

**Explanation:**  
The given SQL statement involves multiple operations: selection (WHERE clause), projection (SELECT \*), grouping (GROUP BY), and filtering groups (HAVING). In relational algebra, these correspond to a combination of operations, not a single operation like selection, projection, or join.

 **Transactions are initiated by BEGIN TRANSACTION and terminated by:**  
a. COMMIT  
b. ROLL BACK  
c. **Both**  
d. None

**Explanation:**  
In SQL, transactions are initiated with BEGIN TRANSACTION and can be terminated by either COMMIT, which saves the changes, or ROLLBACK, which undoes the changes.

 **Which of the following is correct?**  
a. COMMIT  
b. ROLL BACK  
c. **Both**  
d. None

**Explanation:**  
Both COMMIT and ROLLBACK are valid SQL commands used to manage transactions: COMMIT to save changes and ROLLBACK to undo them.

 **In SQL aggregate functions, use:**  
a. **HAVING**  
b. INDEX  
c. PRIMARY KEY  
d. FOREIGN KEY

**Explanation:**  
In SQL, the HAVING clause is used in conjunction with aggregate functions to filter groups based on the results of those functions, typically after a GROUP BY clause.

 **Which of the following command(s) is/ are related to transaction control in SQL?**  
a. ROLLBACK  
b. COMMIT  
c. SAVEPOINT  
d. **All of the above**

**Explanation:**  
In SQL, transaction control commands include ROLLBACK to undo changes, COMMIT to save changes, and SAVEPOINT to set points within a transaction for partial rollbacks.

 **Which of the following statement is true about “HAVING” and “WHERE” clause in SQL?**  
a. **WHERE is always used before GROUP BY and HAVING after GROUP BY.**  
b. WHERE is always used after GROUP BY and HAVING before GROUP BY.  
c. WHERE is used to filter groups but HAVING is used to filter rows.  
d. None

**Explanation:**  
In SQL, the WHERE clause is used to filter rows before any grouping occurs, and it is placed before the GROUP BY clause. The HAVING clause is used to filter groups after the GROUP BY operation and is placed after the GROUP BY clause.

 **What is the difference between TRUNCATE, DELETE and DROP?? Which of the following statement is/are correct?**  
a. **DELETE operation can be rolled back but TRUNCATE and DROP operations cannot be rolled back.**

**Explanation:**  
In many SQL databases, the DELETE operation can be rolled back if it is part of a transaction, whereas TRUNCATE and DROP are DDL commands that typically commit immediately and cannot be rolled back. However, this behaviour can vary depending on the specific database system.

 What **will be the output for the below query? Query: SELECT NAME FROM TABLE1 WHERE NAME LIKE ‘%\_\_\_\_\_\_\_\_\_%’ Note: the above operation contains 6 underscores (‘’) used with LIKE operator.**  
a. It will return names where number of characters in names are greater than 6  
b. It will return names where number of characters in names are less than or equals to 6  
c. It will give an error  
d. **None**

**Explanation:**  
The query SELECT NAME FROM TABLE1 WHERE NAME LIKE ‘%\_\_\_\_\_\_%’ with six underscores will return names that have at least six characters, as the pattern requires at least six characters to match the six underscores, with any characters before or after. Therefore, none of the provided options accurately describe the output.

 **In SQL the statement SELECT \* FROM R is equivalent to:**  
a. **Projection operation on R**  
b. Joining operation on R  
c. Multiplication operation on R  
d. None

**Explanation:**  
In SQL, the statement SELECT \* FROM R selects all columns from the relation R, which is equivalent to the projection operation in relational algebra that includes all attributes of R, effectively returning the entire relation R.