This set of SQL Server Multiple Choice Questions & Answers (MCQs) focuses on “Data Types”.

1. Which of the following is a large object data type?  
a) varchar(max)  
b) varbinary(max)  
c) nvarchar(max)  
d) image

Answer: d  
Explanation: In SQL Server, based on their storage characteristics, some data types are designated as large value data types and large object data types.

2. Data types in SQL Server are organized into how many categories?  
a) 6  
b) 8  
c) 9  
d) 10

Answer: a  
Explanation: SQL Server offers six categories of data types for your use:-exact numeric, Unicode character strings, approximate numeric, Binary strings, Date and time and Character strings.

3. Exact Numeric data type is \_\_\_\_\_\_\_\_\_\_\_  
a) bigint  
b) int  
c) smallmoney  
d) all of the mentioned

Answer: d  
Explanation: Exact numeric data types store numeric values where you wish to specify the precision of the variable. They may include integer or decimal numbers.

4. ntext data type falls under which category?  
a) Exact numerics  
b) Character strings  
c) Unicode character strings  
d) None of the mentioned

Answer: c  
Explanation: ntext is fixed and variable-length data type for storing large non-Unicode and Unicode character.

5. A column of type \_\_\_\_\_\_\_\_\_\_ may contain rows of different data types.  
a) ntext  
b) date  
c) smallmoney  
d) sql\_variant

Answer: d  
Explanation: sql\_variant is data type that stores values of various SQL Server-supported data types.

6. You want to track date and time of the last write access per row?  
a) Add TIMESTAMP column to the table  
b) Add a DATETIME column to the table and assign getdate() as the default value  
c) Add a DATETIME column to the table and write a trigger that sets its value  
d) Add a UNIQUEIDENTIFIER column to the table and use it with SQL Server’s built-in functions

Answer: a  
Explanation: The correct answer is Add a DATETIME column to the table and write a trigger that sets its value.

7.\_\_\_\_\_\_\_\_\_ is a spatial data type.  
a) geometry  
b) sql\_variant  
c) cursor  
d) all of the mentioned

Answer: b  
Explanation: SQL Server supports the geometry and geography data types for storing spatial data. These types support methods and properties that allow for the creation, comparison, analysis, and retrieval of spatial data.

8. Which of the following data type is not present in SQL Server?  
a) bit  
b) boolean  
c) hierarchyid  
d) geography

Answer: b  
Explanation: SQL Server doesn’t have a Boolean data type, at least not by that name. To store True/False, Yes/No, and On/Off values, use the bit data type. It accepts only three values: 0, 1, and NULL.

9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is monetary data type in SQL Server.  
a) Smallmoney  
b) sql\_variant  
c) Cursor  
d) None of the Mentioned

Answer: a  
Explanation: Monetary data types are data types that represent monetary or currency values such as smallmoney and money.

10. Which of the data type has a storage size of 8 bytes?  
a) timestamp  
b) uniqueidentifier  
c) real  
d) smallmoney

Answer: a  
Explanation: uniqueidentifier, real and smallmoney data types have storage size of 16,4 and 4 bytes respectively.

This set of SQL Server Multiple Choice Questions & Answers (MCQs) focuses on “Joins”.

1. What type of join is needed when you wish to include rows that do not have matching values?  
a) Equi-join  
b) Natural join  
c) Outer join  
d) All of the Mentioned

Answer: c  
Explanation:OUTER JOIN is the only join which shows the unmatched rows.

2. What type of join is needed when you wish to return rows that do have matching values?  
a) Equi-join  
b) Natural join  
c) Outer join  
d) All of the Mentioned

Answer: d  
Explanation: Outer join returns the row having matching as well as non matching values.

3. Which of the following is one of the basic approaches for joining tables?  
a) Subqueries  
b) Union Join  
c) Natural join  
d) All of the Mentioned

Answer: d  
Explanation: The SQL subquery is a SELECT query that is embedded in the main SELECT statement. In many cases, a subquery can be used instead of a JOIN.

4. The following SQL is which type of join: SELECT CUSTOMER\_T. CUSTOMER\_ID, ORDER\_T. CUSTOMER\_ID, NAME, ORDER\_ID FROM CUSTOMER\_T,ORDER\_T WHERE CUSTOMER\_T. CUSTOMER\_ID = ORDER\_T. CUSTOMER\_ID?  
a) Equi-join  
b) Natural join  
c) Outer join  
d) Cartesian join

Answer: a  
Explanation: Equi-join joins only same data entry field. For example, one table contains department id and another table should contain department id.

5. A UNION query is which of the following?  
a) Combines the output from no more than two queries and must include the same number of columns  
b) Combines the output from no more than two queries and does not include the same number of columns  
c) Combines the output from multiple queries and must include the same number of columns  
d) Combines the output from multiple queries and does not include the same number of columns

Answer: c  
Explanation: A single UNION can combine only 2 sql query at a time.

6. Which of the following statements is true concerning subqueries?  
a) Involves the use of an inner and outer query  
b) Cannot return the same result as a query that is not a subquery  
c) Does not start with the word SELECT  
d) All of the mentioned

Answer: a  
Explanation: Subquery—also referred to as an inner query or inner select—is a SELECT statement embedded within a data manipulation language (DML) statement or nested within another subquery.

7. Which of the following is a correlated subquery?  
a) Uses the result of an inner query to determine the processing of an outer query  
b) Uses the result of an outer query to determine the processing of an inner query  
c) Uses the result of an inner query to determine the processing of an inner query  
d) Uses the result of an outer query to determine the processing of an outer query

Answer: a  
Explanation: A ‘correlated subquery’ is a term used for specific types of queries in SQL in computer databases. It is a subquery (a query nested inside another query) that uses values from the outer query in its WHERE clause.

8. How many tables may be included with a join?  
a) One  
b) Two  
c) Three  
d) All of the Mentioned

Answer: d  
Explanation: Join can be used for more than one table. For ‘n’ tables the no of join conditions required are ‘n-1’.

9. The following SQL is which type of join: SELECT CUSTOMER\_T. CUSTOMER\_ID, ORDER\_T. CUSTOMER\_ID, NAME, ORDER\_ID FROM CUSTOMER\_T,ORDER\_T?  
a) Equi-join  
b) Natural join  
c) Outer join  
d) Cartesian join

Answer: d  
Explanation: Cartesian Join is simply the joining of one or more table which returns the product of all the rows in these tables.

10. Which is not a type of join in T-SQL?  
a) Equi-join  
b) Natural join  
c) Outer join  
d) Cartesian join

Answer: b  
Explanation: A NATURAL JOIN is an inner join where the RDBMS automatically selects the join columns based on common columns names. Some RDBMS vendors, like Oracle but not SQL Server, implement a NATURAL JOIN operator.

This set of SQL Server Multiple Choice Questions & Answers (MCQs) focuses on “Modifying Data – 1”.

1. The query given below will give an error. Which one of the following has to be replaced to get the desired output?

**SELECT** ID, name **FROM** 1\_Order **WHERE** instructor=1;

a) \_Order  
b) 2Order  
c) 3Order  
d) Instructor

Answer: a  
Explanation: Table name should not start with numerical value as per naming convention in T-SQL.

2. The following query can be replaced by which one of the following?

**SELECT** name, course\_id

**FROM** instructor, teaches

**WHERE** instructor\_ID= teaches\_ID;

a)

**SELECT** name,course\_id

**FROM** teaches,instructor

**WHERE** instructor\_id=course\_id;

b)

**SELECT** name, course\_id

**FROM** instructor **NATURAL** **JOIN** teaches;

c)

**SELECT** name ,course\_id

**FROM** instructor;

d)

**SELECT** course\_id

**FROM** instructor **JOIN** teaches;

Answer: b  
Explanation: Join clause joins two tables by matching the common column.

3. Select \* from employee where salary>10000 and dept\_id=101;  
Which of the following fields are displayed as output?  
a) Salary, dept\_id  
b) Employee  
c) Salary  
d) All the field of employee relation

Answer: d  
Explanation: Here \* is used to select all the fields of the relation.

4. Which of the following statements contains an error?  
a)

**SELECT** \* **FROM** emp

**WHERE** empid = 10003;

b)

**SELECT** empid

**FROM** emp

**WHERE** empid = 10006;

c) Select empid from emp;  
d)

**SELECT** empid

**WHERE** empid = 1009 **AND** lastname = ‘GELLER’;

Answer: d  
Explanation: This query do not have from clause which specifies the relation from which the values has to be selected.

5. Insert into employee \_\_\_\_\_\_\_\_\_ (1002,Joey,2000);  
In the given query which of the keyword has to be inserted?  
a) Table  
b) Values  
c) Relation  
d) Field

Answer: b  
Explanation: Value keyword has to be used to insert the values into the table.

6. To delete a database \_\_\_\_\_\_\_\_\_\_\_ command is used.  
a) Delete database database\_name  
b) Delete database\_name  
c) drop database database\_name  
d) drop database\_name

Answer: c  
Explanation: This will delete the database with its structure.

7. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is essentially used to search for patterns in target string.  
a) Like Predicate  
b) Null Predicate  
c) In Predicate  
d) Out Predicate

Answer: a  
Explanation: Like matches the pattern with the query.

8. Which is a duplicate copy of a file program that is stored on a different storage media than the original location?  
a) Concurrency  
b) Deadlock  
c) Backup  
d) Recovery

Answer: c  
Explanation: Backup is required to protect the data.

9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ joins are SQL server default.  
a) Outer  
b) Inner  
c) Equi  
d) None of the Mentioned

Answer: b  
Explanation: Inner query joins only the rows that are matching.

10. To alter a database \_\_\_\_\_\_\_\_\_\_\_ command is used.  
a) ALTER database database\_name  
b) ALTER database\_name  
c) ALTER database database\_name  
d) ALTER database\_name

Answer: c  
Explanation: ALTER Statement will alter the database structure and its related functionalities.

This set of SQL Server Questions and Answers for experienced people focuses on “Modifying Data – 2”.

1. The EXISTS keyword will be true if \_\_\_\_\_\_\_\_\_\_\_\_  
a) Any row in the subquery meets the condition only  
b) All rows in the subquery fail the condition only  
c) Both of these two conditions are met  
d) Neither of these two conditions is met

Answer: a  
Explanation: EXISTS keyword checks for existence of condition.

2. Which of the following is an aggregate function?  
a) Average  
b) Sum  
c) With  
d) Minimum

Answer: b  
Explanation: Sum is used to add set of values.

3. The command \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ such tables are available only within the transaction executing the query, and are dropped when the transaction finishes.  
a) Create table  
b) Create temporary table  
c) Create view  
d) Create label view

Answer: b  
Explanation: DDL statement is used alter structure of table.

4. In the query given above which one of the following is a temporary relation?

**WITH** max\_budget (**VALUE**) **AS**

(**SELECT** **MAX**(budget)

**FROM** department)

**SELECT** budget

**FROM** department, max\_budget

**WHERE** department.budget = **MAX** budget.value;

a) Budget  
b) Department  
c) Value  
d) Max\_budget

Answer: d  
Explanation: With clause creates a temporary relation.

5. Aggregate functions can be used in the select list or the\_\_\_\_\_\_\_clause of a select statement or subquery. They cannot be used in a \_\_\_\_\_\_ clause.  
a) Where, having  
b) Having, where  
c) Group by, having  
d) Group by, where

Answer: b  
Explanation: To include aggregate functions having clause must be included after where.

6. Which is the duplication of computer operations and routine backups to combat any unforeseen problems?  
a) Concurrency  
b) Deadlock  
c) Backup  
d) Recovery

Answer: d  
Explanation: Recovery means to take the backup data while there is a crash.

7. The UNION SQL clause can be used with \_\_\_\_\_\_\_\_\_\_\_\_  
a) SELECT clause only  
b) DELETE and UPDATE clauses  
c) UPDATE clause only  
d) All of the mentioned

Answer: a  
Explanation: The SQL UNION operator is used to combine the result sets of 2 or more SELECT statements. It removes duplicate rows between the various SELECT statements.

8. Find all the tuples having temperature greater than ‘Paris’.  
a)

**SELECT** \* **FROM** weather

**WHERE** temperature > (**SELECT** temperature **FROM** weather **WHERE** city = ‘Paris’

b)

**SELECT** \* **FROM** weather

**WHERE** temperature > (**SELECT** \* **FROM** weather **WHERE** city = ‘Paris’)

c)

**SELECT** \* **FROM** weather

**WHERE** temperature > (**SELECT** city **FROM** weather **WHERE** city = ‘Paris’)

d)

**SELECT** \* **FROM** weather

**WHERE** temperature > ‘Paris’ temperature

Answer: a  
Explanation: Subquery—also referred to as an inner query or inner select—is a SELECT statement embedded within a data manipulation language (DML) statement or nested within another subquery.

9. Which of the following statement is true?  
a) DELETE does not free the space containing the table and TRUNCATE free the space containing the table  
b) Both DELETE and TRUNCATE free the space containing the table  
c) Both DELETE and TRUNCATE does not free the space containing the table  
d) DELETE free the space containing the table and TRUNCATE does not free the space containing the table

Answer: a  
Explanation: The SQL TRUNCATE command is used to delete all the rows from the table and free the space containing the table.

10. How can you change “Hansen” into “Nilsen” in the “LastName” column in the Persons table?  
a)

**UPDATE** Persons

**SET** LastName=’Hansen’ **INTO** LastName=’Nilsen’

b)

**MODIFY** Persons

**SET** LastName=’Nilsen’ **WHERE** LastName=’Hansen’

c)

**MODIFY** Persons

**SET** LastName=’Hansen’ **INTO** LastName=’Nilsen’

d)

**UPDATE** Persons

**SET** LastName=’Nilsen’ **WHERE** LastName=’Hansen’

Answer: d  
Explanation: In its simplest form, the syntax for the UPDATE statement when updating one table is:UPDATE table SET column1 = expression1,column2 = expression2,… WHERE conditions.

This set of SQL Server Multiple Choice Questions & Answers (MCQs) focuses on “Constraints”.

1. Which of the following is not a class of constraint in SQL Server?  
a) NOT NULL  
b) CHECK  
c) NULL  
d) UNIQUE

Answer: c  
Explanation: NOT NULL specifies that the column does not accept NULL values. For more information.

2. Point out the correct statement.  
a) CHECK constraints enforce domain integrity  
b) UNIQUE constraints enforce the uniqueness of the values in a set of columns  
c) In a UNIQUE constraint, no two rows in the table can have the same value for the columns  
d) All of the mentioned

Answer: d  
Explanation: Constraints let you define the way the Database Engine automatically enforces the integrity of a database.

3. Which of the following constraint does not enforce uniqueness?  
a) UNIQUE  
b) Primary key  
c) Foreign key  
d) None of the mentioned

Answer: c  
Explanation: FOREIGN KEY constraints identify and enforce the relationships between tables.

4. Constraints can be applied on \_\_\_\_\_\_\_\_\_\_\_  
a) Column  
b) Table  
c) Field  
d) All of the mentioned

Answer: d  
Explanation: Constraints can be column constraints or table constraints.

5. Point out the wrong statement.  
a) Table constraints must be used when more than one column must be included in a constraint  
b) A column constraint is specified as part of a column definition and applies only to that column  
c) A table constraint is declared independently from a column definition and can apply to more than one column in a table  
d) Primary keys allow for NULL as one of the unique values

Answer: d  
Explanation: Primary keys also enforce uniqueness, but primary keys do not allow for NULL as one of the unique values.

6. Purpose of foreign key constraint in SQL Server is \_\_\_\_\_\_\_\_\_\_  
a) FOREIGN KEY constraints identify and enforce the relationships between tables  
b) A foreign key in one table points to a candidate key in another table  
c) You cannot insert a row with a foreign key value, except NULL, if there is no candidate key with that value  
d) None of the mentioned

Answer: a  
Explanation: Foreign key is to enforce referential integrity.

7. Which of the following is not a foreign key constraint?  
a) NO ACTION  
b) CASCADE  
c) SET NULL  
d) All of the mentioned

Answer: b  
Explanation: Foreign key Constraints are the built-in mechanism for enforcing data integrity.

8. Which of the following foreign key constraint specifies that the deletion fails with an error?  
a) NO ACTION  
b) CASCADE  
c) SET NULL  
d) All of the mentioned

Answer: a  
Explanation: The ON UPDATE clause defines the actions that are taken if you try to update a candidate key value to which existing foreign keys point.

9. How many types of constraints are present in SQL Server?  
a) 4  
b) 5  
c) 6  
d) 7

Answer: c  
Explanation: Constraints are Primary key, Foreign Key, Unique Key, Not Null, Check, Default.

10. Which of the constraint can be enforced one per table?  
a) Primary key constraint  
b) Not Null constraint  
c) Foreign Key constraint  
d) Check constraint

Answer: a  
Explanation: Each table is having only one primary key constraint and it contains only unique values.

This set of SQL Server Multiple Choice Questions & Answers (MCQs) focuses on “Subqueries”.

1. Select \_\_\_\_\_\_\_\_\_\_ from instructor where dept name= ’Comp. Sci.’;  
Which of the following should be used to find the mean of the salary?  
a) Mean(salary)  
b) Avg(salary)  
c) Sum(salary)  
d) Count(salary)

Answer: b  
Explanation: Avg() is used to find the mean of the values.

2. The \_\_\_\_\_\_\_\_ connective tests for set membership, where the set is a collection of values produced by a select clause. The \_\_\_\_\_\_\_\_\_ connective tests for the absence of set membership.  
a) Or, in  
b) Not in, in  
c) In, not in  
d) In, or

Answer: c  
Explanation: In checks if the query has the value but not in checks if it does not have the value.

3. Select ID, GPA from student grades order by GPA \_\_\_\_\_\_\_\_\_\_\_\_  
Inorder to give only 10 rank on the whole we should use.  
a) Limit 10  
b) Upto 10  
c) Only 10  
d) Max 10

Answer: a  
Explanation: Limit clause does not support partitioning, so we cannot get the top n within each partition without performing ranking; further, if more than one student gets the same GPA, it is possible that one is included in the top 10, while another is excluded.

4. Suppose we are given a view tot credits (year, num credits) giving the total number of credits taken by students in each year.The query that computes averages over the 3 preceding tuples in the specified sort order is \_\_\_\_\_\_\_\_\_  
a)

**SELECT** **YEAR**, avg(num credits)

**OVER** (**ORDER** **BY** **YEAR** **ROWS** 3 preceding) **AS** avg total credits

**FROM** tot credits;

b)

**SELECT** **YEAR**, avg(num credits)

**OVER** (**ORDER** **BY** **YEAR** **ROWS** 3 unbounded preceding) **AS** avg total credits

**FROM** tot credits;

c)

**SELECT** **YEAR**, **MIN**(num credits)

**OVER** (**ORDER** **BY** **YEAR** **ROWS** 3 unbounded preceding) **AS** avg total credits

**FROM** tot credits;

d)

**SELECT** **YEAR**, **SUM**(num credits)

**OVER** (**ORDER** **BY** **YEAR** **ROWS** 3 unbounded preceding) **AS** avg total credits

**FROM** tot credits;

Answer: a  
Explanation: Suppose that instead of going back a fixed number of tuples, we want the window to consist of all prior years we use rows unbounded preceding.

5. Which of the following is not the function of client?  
a) Compile queries  
b) Query optimization  
c) Receive queries  
d) Result formatting and presentation

Answer: b  
Explanation: Query optimization is used to improve the quality.

6. Which server can join the indexes when only multiple indexes combined can cover the query?  
a) SQL  
b) DBMS  
c) RDBMS  
d) All of the mentioned

Answer: a  
Explanation: Indexing reduces the difficulty in searching the data.

7. Select \_\_\_\_\_\_\_\_ dept\_name from instructor;  
Here which of the following displays the unique values of the column?  
a) All  
b) From  
c) Distinct  
d) Name

Answer: c  
Explanation: Distinct keyword selects only the entries that are unique.

8. Select ID, name, dept name, salary \* 1.1 where instructor;  
The query given below will not give an error. Which one of the following has to be replaced to get the desired output?  
a) Salary\*1.1  
b) ID  
c) Where  
d) Instructor

Answer: c  
Explanation: Where selects the rows on a particular condition. From gives the relation which involves the operation. Since Instructor is a relation it has to have from clause.

9. Select \* from student join takes using (ID);  
The above query is equivalent to \_\_\_\_\_\_\_\_\_\_\_\_  
a) Select \* from student inner join takes using (ID);  
b) Select \* from student outer join takes using (ID);  
c) Select \* from student left outer join takes using (ID);  
d) All of the mentioned

Answer: a  
Explanation: Join can be replaced by inner join.

10. The \_\_\_\_\_\_ clause allows us to select only those rows in the result relation of the \_\_\_\_ clause that satisfy a specified predicate.  
a) Where, from  
b) From, select  
c) Select, from  
d) From, where

Answer: a  
Explanation: Where selects the rows on a particular condition. From gives the relation which involves the operation.