1. **What is a table expression? Can you give a technical definition of a table expression?**

A table expression is an expression that creates a virtual table. A named query expression that represents a valid relational table.

1. **In what SQL clause are derived tables (table valued subqueries) located?**

Derived tables are located in the FROM clause of the outer query.

1. **Why can you refer to column aliases in an outer query that you defined in an inner table valued subquery?**

Because the inner table valued subquery is run first.

1. **What SQL key word defines a common table expression?**

WITH

1. **When using common table expressions, can a subsequent derived table use a table alias declared in a preceding table expression?**

No. As with derived tables, as soon as the outer query finishes, the CTE goes out of scope.

1. **Can a main query refer to a previously defined common table expression by multiple aliases?**

Yes, because CTEs are run and stored in memory.

1. **In SQL, is a view a durable object?**

Yes, because it stores the query in memory.

1. **In a view, what does WITH CHECK OPTION do? Why is this important?**

If you want to prevent modifications that conflict with the view’s filter, add WITH CHECK OPTION at the end of the query defining the view. The WITH CHECK OPTION checks to see if any attempts to INSERT data into a view matches the search criteria. If it does not match an error will be raised. If the data does match the INSERT will be allowed. This is important if the data inserted was going to be accessed by the VIEW. This removes the issues of losing data in the VIEW that will persist in the original table thus being lost in that table

1. **In a view, what does SCHEMABINDING do? Why is this important?**

It binds the schema of referenced objects and columns to the schema of the referencing object. It indicates that referenced objects cannot be dropped and that referenced columns cannot be dropped or altered. This is important because it reduces the chance for errors when trying to reference columns that used to but no longer exist.

1. **What is a table valued function?**

A table-valued function is a persistent table that can receive parameters that will create a different output. It is basically a view with parameters.

1. **What does the APPLY operator do?**

The APPLY operator runs the subquery for every row of the outer query. It is like a JOIN operator, however each row for the table on the left is processed before the row on the right.

1. **What are the two forms of the APPLY operator? Give an example of each.**

The two forms of the APPLY operator are CROSS APPLY and OUTER APPLY.

