1. **What are the key differences between a Data Flow Task and an Execute SQL Task? Give one scenario for each.**

**Data flow handles the movement and transformation of the data from source to destination and also cleans data, casts datatype, aggregate and sort data, uses conditionals to categorize. Execute sql task runs slq tatement and stored procedures.**

1. **Why is a Data Conversion component often required when bringing data from a flat file into a Data Flow? What common problem does it solve?**

**When Data type of source and destinationa doesn’t match, it convert it to suitable data types. For example, data I am pulling from csv is string but destination, such as sql table, receives only fout byte signed int. inthis case data conversion coverts data into suitable one while keeping original data in string**

1. **List the three key properties you must configure inside an Execute SQL Task.**

**There should be connection to slq server because it should know where execute slq should run thee query, second configuration is that IT SHOULD CONTAIN SLQ TATEMENT. Third one is that resultset in where Specifies the type of result the SQL statement returns.**

1. **Which .NET namespaces are commonly imported when working with files and database connections in a Script Task?**

**In C# you should import appropriate namespaces to work with files and connect them, such as system.io, streamwriter, systemdata, system.data.sqlclient and other to do tasks.**

1. **Describe the purpose of a package-level variable.**

**Package-level variables can store values and be used across the package. it is a dynamic value based on an expression, in which it changes its values, and is used in multiple processes, for example, as a new column or to do some tasks**

1. **Explain how a UNION ALL transformation works in SSIS. What requirement must each input share before you can union them?**

**Union all combines multiple sources into a single stream without eliminating the duplicates. All colums should match and their data types should match which is more important one to pull data to destination.**

1. **What error appears if the Excel source and Flat File source have mismatched data types at union time, and how can fix it?**

**In flatfile all data types can be string and we can change data type of datas coming from excel by the help of data conversion. . Another solution is the derived column in where we can cast data types in suityable one.**

1. **SSIS variables can be used inside a Script Task. How do you read the value of an SSIS variable in C#?**

**In the first step we should go to script tap and fins readonlyvariabel or readwrite variables through them we should find and choose variable we want to use then in C#**

**Firstly in c# we should assign our variable to C# variable then we should co0nvert it into string because In C# messagebox does as the same function as in python print does show result. By messagebox.show we can show result of variable**

1. **Truncating destination table before inserting often used. a. Why is truncation important? b. How would results differ if you omitted the truncate?**

**Truncation is important because when loading data if we don’t truncate we load duplicate data and the size of table gets bigger and it result in inefficient performance. So that truncating can help us to produce accurate reportsa analisis.**