

Section A: Multiple Choice Questions (1 mark each = 10 marks)

1. **What is the purpose of a “Derived Column” in SSIS?**
 - a) Load data into SQL
 - b) Create new columns or transform data
 - c) Handle errors
 - d) Perform join operations
2. **Which SSIS component is used to convert non-Unicode data to Unicode?**
 - a) Data Conversion
 - b) Derived Column
 - c) Conditional Split
 - d) Union All
3. **In Lab 3, which function is used to manage dates with varying formats like DDMMYYYY and DMMYYYY?**
 - a) Merge Join
 - b) Data Conversion
 - c) Conditional Split
 - d) Lookup
4. **What is a Conformed Dimension?**
 - a) A dimension that changes over time
 - b) A dimension with no attributes
 - c) A shared dimension across multiple fact tables
 - d) A slowly changing dimension
5. **Which dimension combines low-cardinality flags into a single table?**
 - a) Degenerate Dimension
 - b) Junk Dimension
 - c) Outrigger Dimension
 - d) Multi-valued Dimension
6. **In SSIS, what is the use of “Union All”?**
 - a) Merge two databases
 - b) Split data into branches
 - c) Combine outputs from multiple sources
 - d) Sort rows
7. **A Role-Playing Dimension is one that:**
 - a) Has changing attributes
 - b) Appears multiple times in a fact table with different meanings
 - c) Stores date only
 - d) Is used for temporary storage
8. **Which dimension is best suited when there’s a many-to-many relationship between dimension and fact?**
 - a) Role-playing
 - b) Outrigger
 - c) Multi-valued
 - d) Degenerate
9. **Which type of Slowly Changing Dimension keeps historical records?**
 - a) Type 0

- b) Type 1
- c) Type 2
- d) Type 3

10. What issue does a Mini-Dimension solve?

- a) Missing values in ETL
- b) Fast-changing attributes
- c) Reusable data
- d) Combining multiple sources

Section B: Written Questions (10 marks total)

11. (2 marks) Explain the steps to extract data from a flat file and load it into a SQL Server database using SSIS.

12. (2 marks) Describe the difference between a Shrunk Rollup Dimension and a Swappable Dimension with an example of each.

13. (2 marks) In Lab 3, you had to handle date formats in two different lengths (7 and 8 characters). Describe how the Conditional Split and Derived Column transformations help handle this.

14. (2 marks) What are the main disadvantages of using a Heterogeneous Dimension by merging attributes into one table?

15. (2 marks) Identify and explain two real-world scenarios where you would use:

- a) A Junk Dimension
- b) A Multi-Valued Dimension