Vendor: Microsoft

Exam Code: 70-451

Exam Name: PRO: Designing Database Solutions and Data Access Using Microsoft SQL Server 2008

Version: DEMO
1: You are a database developer. You plan to design a database solution by using SQL Server 2008. You configure a database on a server to use a common language runtime (CLR). You need to create a CLR assembly that enables the CLR stored procedure to access environment variables available on the server. You also need to ensure that the CLR assembly has the minimum permissions assigned. What should you do?
A. Enable the TRUSTWORTHY database property.
B. Create the assembly by using the SAFE permission set.
C. Create the assembly by using the UNSAFE permission set.
D. Create the assembly by using the EXTERNAL ACCESS permission set.
Correct Answers: D

2: You are a database developer. You provide solutions by using SQL Server 2008 in an enterprise environment. Your online transaction processing (OLTP) database contains a table named SalesOrders. Your data warehouse contains a table named factBuyingHabits. The factBuyingHabits table has no indexes. You need to synchronize data between the two tables on a weekly basis. The synchronization process has the following requirements:
- New records in the SalesOrders table are inserted in the factBuyingHabits table.
- When a record is modified in the SalesOrders table, the modification is updated in the factBuyingHabits table.
- Records that are deleted from the SalesOrders table are also deleted from the factBuyingHabits table.
You need to design an appropriate synchronization solution. You want to achieve this goal by using minimum amount of coding and administrative efforts.
What should you do?
A. Design an SSIS package each for the INSERT, UPDATE, and DELETE operations. Schedule a job to run this package.
B. Design a single SSIS package that uses the Slowly Changing Dimension task. Schedule a job to run this package.
C. Write one stored procedure that contains a MERGE statement to perform the INSERT, UPDATE, and DELETE operations. Schedule a job to run the stored procedure.
D. Write three stored procedures each for the INSERT, UPDATE, and DELETE operations. Schedule a job to run the stored procedures in a sequential manner.
Correct Answers: C

3: You are a database developer. You plan to design a database solution by using SQL Server 2008. You create a stored procedure that uses the TRY/CATCH syntax in a new database. When the stored procedure is executed, it logs information about each step in the TRY block into a table named dbo.ExecutionLog. When an error occurs, the stored procedure must perform the following tasks:
- Roll back the changes made to the target tables.
- Retain the log entries stored in the dbo.ExecutionLog table.
You need to ensure that the stored procedure performs the given tasks.
What should you do?
A. Start a transaction in the TRY block.
After each step, insert log entries into the dbo.ExecutionLog table.
In the CATCH block, commit the transaction.
After the CATCH block, use data in the dbo.ExecutionLog table to reverse any changes made to
the target tables.
Commit the transaction if one exists.
B.Start a transaction in the TRY block.
Before each step, define a transactional save point.
After each step, insert log entries into the dbo.ExecutionLog table.
In the CATCH block, roll back to the transactional save points.
After the CATCH block, commit the transaction.
C.Define a temporary table before the TRY block by using the same columns as that of the
dbo.ExecutionLog table.
Start a transaction in the TRY block.
After each step, insert log entries into the temporary table.
In the CATCH block, roll back the transaction.
After the CATCH block, insert the rows from the temporary table into the dbo.ExecutionLog
table.
Commit the transaction if one exists.
D.Define a table variable before the TRY block by using the same columns as that of the
dbo.ExecutionLog table.
Start a transaction in the TRY block.
After each step, insert log entries into the table variable.
In the CATCH block, roll back the transaction.
After the CATCH block, insert the rows from the table variable into the dbo.ExecutionLog table.
Commit the transaction if one exists.

Correct Answers: D

4: You are a SQL Server 2008 developer. You create an online transaction processing (OLTP)
database by using SQL Server 2008 in an enterprise environment. The database contains a table
named SalesDetails. Each record in the table contains data in any one of the following pairs of
nullable columns:
  - InternetSalesTargets and InternetSales
  - ResellerSalesTargets and ResellerSales
  - ForeignSalesTargets and ForeignSales
The table also contains three NOT NULL key columns. A large number of records are inserted on
a daily basis into the SalesDetails table.
Summary reports are generated from the SalesDetails table. Each report is based on aggregated
data from any one of the pairs of nullable columns.
You need to design a view or views to meet the following requirements:
  - The SalesDetails table cannot be directly modified.
  - The performance of the reports is maximized.
  - The amount of storage space for each report is minimized.
What should you do?
A.Create an indexed view from the SalesDetails table that contains aggregated data of all the
columns required by all the reports.
B. Create multiple indexed views from the SalesDetails table so that each view contains aggregated
data of only the columns required by the respective report.
C. Create multiple Report tables from the SalesDetails table so that each Report table contains
aggregated data of only the columns required by the respective report. Create views on top of each
of the Report tables.
D. Perform a quick transfer of aggregated new records to a staging table at the end of each month.
Create an indexed view from the staging table that contains aggregated data of all the columns
required by all the reports.

Correct Answers: B

5: You are a database developer. You plan to design a database solution by using SQL Server 2008.
You have a database that contains a table and a table-valued function. The table-valued function
accepts the primary key from the table as a parameter. You plan to write a query that joins the
table to the results of the table-valued function. You need to ensure that only rows from the table
that produce a result set from the table-valued function are returned. Which join predicate should
you use?
A. CROSS APPLY
B. OUTER APPLY
C. INNER JOIN
D. LEFT OUTER JOIN

Correct Answers: A

6: You are a database developer. You plan to design a database solution by using SQL Server 2008.
A database contains a view that has the following features:
   - It contains a WHERE clause that filters specific records.
   - It allows data updates.
You need to prevent data modifications that do not conform to the WHERE clause. You want to
achieve this goal by using minimum effort.
What should you do?
A. Create an INSTEAD OF trigger on the view.
B. Create a unique clustered index on the view.
C. Alter the view by adding the WITH CHECK OPTION clause.
D. Alter the view by adding the WITH SCHEMABINDING clause.

Correct Answers: C

7: You are a database developer. You develop solutions by using SQL Server 2008 in an enterprise
environment. You plan to create a stored procedure that queries a sales table and produces forecast
data. You do not have administrative permissions, and you are not the owner of the database.
You have permissions to create stored procedures. Users will only have permissions to execute
your stored procedures. You need to ensure that users can execute the stored procedures. What
should you do?
A. Set the TRUSTWORTHY property of the database to ON.
B. Include an EXECUTE AS OWNER clause when you create each stored procedure.
C. Include an EXECUTE AS CALLER clause when you create each stored procedure.
D. Include a SETUSER statement before you query the sales table in each stored procedure.

**Correct Answers: B**

8: You are a database developer. You plan to design a database solution by using SQL Server 2008. The database will contain a common language runtime (CLR) user-defined scalar function. The function will return an integer value. You need to ensure that the computed columns that use the result from this function can be indexed. What should you do?

A. Ensure that the logic of the function returns the same value for the same input values and the same database state.
B. Ensure that the logic of the function returns a different value for the same input values and the same database state.

**Correct Answers: A**

9: You are a database developer. You plan to design a database solution by using SQL Server 2008. There are two schemas named Sales and Marketing. You are the owner of the Sales schema and the Marketing schema is owned by a user named MarketingUser. Users of the Marketing schema do not have permissions to access the Sales schema. You have permissions to create objects in all schemas in the database. The Sales schema has a table named Customers. You plan to create a stored procedure in the Marketing schema for the marketing team. The stored procedure will select data from the Customers table and will be owned by MarketingUser. You need to ensure that the marketing team is able to execute the stored procedure. What should you do?

A. Create the procedure by using the EXECUTE AS SELF option.
B. Create the procedure by using the EXECUTE AS CALLER option.

**Correct Answers: A**

10: You use SQL Server 2008 to design a database that will hold incoming XML responses for an EDI system.

You have the following requirements:
- The data is accessible to heterogeneous platforms.
- The database stores various types of reports from multiple sources.
- The solution allows search by keywords.
- The database stores large amounts of data.
- The database is scalable.
You need to design the database to meet the given requirements. What should you do?
A. Use SQL Server 2008 tables to store data and include proper indexes.
B. Use ANSI text files to store text reports, and use SQL Server 2008 tables to store numerical reports.
C. Save reports in binary format in a file within a Windows folder. Save the path of the file in SQL Server 2008 tables.
D. Store reports in XML format, and use SQL Server 2008 tables to store the data. Index the XML data to improve performance.

Correct Answers: D

11: You are a database developer. You plan to design a database solution by using SQL Server 2008. The database will contain a table that will store customer data as XML data. The data supports an application that cannot be altered. You plan to prevent the following types of errors in the XML data.
- NULL values in the Customer Name field
- Non-numeric values in the Customer Telephone field.
- Invalid values in the Gender field
You need to implement the plan without modifying the application. What should you do?
A. Use the FileStream data type.
B. Change the XML data type to Typed XML.
C. Use the HierarchyID data type to validate data.
D. Save the XML data in a standard table format. Specify the correct data types, constraints, and NOT NULL parameters in the standard table.

Correct Answers: B

12: You are a database developer. You plan to design a database solution by using SQL Server 2008. A database contains a table named Employee_Vacation. You are given an updated list of employee vacations used. The list is in an XML formatted file. The extract of the XML format is written in the following manner.

```
<Company Name ="ABC Company Pvt Ltd">
<EmployeeLeave>
  <Employee ID = "1" Name="Jim Reeves" />
<Leaves>
  <Leave Date="2008-02-12" />
  <Leave Date="2008-02-13" />
  <Leave Date="2008-02-14" />
</Leaves>
</EmployeeLeave>
```

You plan to import the data and update the Employee_Vacation table. You design a query to calculate the number of vacation days used by each employee. You need to ensure that vacation days are accurately counted for each employee.
What should you do?
A. Use an XQuery expression along with the LET clause and the count function. Return the count in XML format.
B. Use an XML index. Aggregate the number of vacation days for each employee, and then return the total count in XML format.
C. Use the OPENXML function to convert XML data into a standard table format. Execute the Transact-SQL count function on the vacation days, and then return the count in XML format.
D. Use an XQuery expression to write the information from XML format to a SQL Server table. Aggregate the number of vacation days from the tables, and then return the count in XML format.

Correct Answers: A

13: You are a database developer. You plan to design a database solution by using SQL Server 2008. The database includes a table that contains the following product inventory information:

<table>
<thead>
<tr>
<th>Department</th>
<th>Class</th>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
</table>

You plan to write a query that produces the sum of quantity data broken into the following groups:

- Department
- Department and Class
- Department and Item
- Department, Class, and Item

You need to write the query by using the minimum possible number of Transact-SQL statements. What should you recommend?
A. Write a single query that contains a GROUP BY clause.
B. Write a single query that contains a GROUP BY WITH CUBE clause.
C. Write a single query that contains a GROUP BY WITH ROLLUP clause.
D. Write a single query that contains a GROUP BY GROUPING SETS clause.

Correct Answers: D

14: You are a database developer. You plan to design a database solution by using SQL Server 2008. A stored procedure uses the INSERT, UPDATE, and DELETE statements separately to load data into a table. You need to rewrite the stored procedure to use a single statement to load the data. What should you do?
A. Write a MERGE statement by using a WHEN MATCHED clause and a WHEN NOT MATCHED BY TARGET clause.
B. Write a MERGE statement by using a WHEN MATCHED clause and a WHEN NOT MATCHED BY SOURCE clause.
C. Write a MERGE statement by using a WHEN MATCHED clause, a WHEN NOT MATCHED BY TARGET clause, and a WHEN NOT MATCHED BY SOURCE clause.
D. Write a MERGE statement by using a WHEN MATCHED clause and two WHEN NOT MATCHED BY SOURCE clauses.

Correct Answers: C
You are a database developer. You plan to design a database solution by using SQL Server 2008. A database contains a table named Policies. The table contains information about 100 million insurance policies. A complex stored procedure executes daily to calculate the risk amount of each policy and stores the information in the table. When the stored procedure is executed, users experience poor performance and query time-out errors. The queries used in the stored procedure are optimized for performance. You need to ensure that the disruption to users is minimal while the stored procedure is being executed. What should you do?

A. Use the READ UNCOMMITTED transaction isolation level.
B. Split the execution of the stored procedure into batches.
C. Write the risk amounts to a table variable before you update the Policies table.
D. Write the risk amounts to a temporary table before you update the Policies table.

**Correct Answers: B**