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70-451 PRACTICE EXAM

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

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Question: 1

You are a database solutions architect. Your company plans to develop a solution by using a SQL Server 2008 instance. The solution has the following business requirements:
•Import data from various data sources such as Microsoft Office Excel, Microsoft SQL Server 2000,Microsoft SQL Server 2005, and CSV files.
•Profile the source data before it is imported.
•Provide collaboration and offline capabilities to mobile users.
•Allow mobile users to use heterogeneous data stores.
You need to configure the appropriate SQL Server components to accomplish the business requirements. You want to achieve this goal by using the minimum amount of administrative effort. Which two SQL Server components should you use? (Each correct answer presents part of the solution. Choose two.)

A. Analysis Services
B. Reporting Services
C. Integration Services
D. Notification Services
E. Microsoft Sync Framework

Answer: C, E

Question: 2

You need to design a database solution that meets the following capabilities:
- Executes SQL Server Integration Services (SSIS) packages
- Executes Transact-SQL
- Schedules tasks
- Sends alerts

Which SQL Server component should you use?

A. Notification Services
B. Service Broker
C. SQL Mail
D. SQL Server Agent

Answer: D

Question: 3

You have a table in a database that contains 30 million rows. You need to ensure that the table meets the following requirements:
- Enables queries on all string values within the table •
- Enables queries to be returned by order of proximity •
- Minimizes the amount of time required to execute queries

What should you do?

A. Create a filtered index.
B. Create a clustered index.
C. Configure Service Broker.
D. Configure a Full-Text-Search.

Answer: D

Question: 4

You are a database developer. You plan to create a database by using SQL Server 2008. The database will store information about students, teachers, classes, and rooms in a school. The database will be used by a scheduling application. In the design plan, the following facts have to be considered:

- Each teacher can teach one or more classes.
- Each student can register for one or more classes.
- Each class can be in one or more rooms.
- Each room can host one or more classes.

You identify the following entities for the database design:

- Students
- Teachers
- Classes
- Rooms
- ClassesStudents
- ClassesTeachers

You need to design the database to ensure normalization.What should you do?

A. 1. Add a new entity named TeachersStudents.
2. Establish a relationship between the Teachers and Students entities by using the TeachersStudents entity.
B. 1. Add a new entity named ClassesRooms. 2. Establish a relationship between the Classes and Rooms entities by using the ClassesRooms entity.
C. 1. Add a new entity named TeachersRooms. 2. Establish a relationship between the Teachers and Rooms entities by using the TeachersRooms entity
D. 1. Create a new entity named StudentsRooms. 2. Establish a relationship between the Students and Rooms entities by using the StudentsRooms entity.

Answer: B

Question: 5

You are a database developer. You plan to design a database solution by using SQL Server 2008. You are creating a database to support the office manager. Your database model has the following structure.

Entity	Attributes
Employee	EmployeeID
Task	TaskID
Assignment	AssignmentID TaskID EmployeeID

The database design has the following business requirements:

- An employee can be assigned more than one task.
- Upon completion, the task is deleted.
- When a task is deleted, the associated assignment is deleted.

When an employee is no longer available to complete a task, the employee link to the assignment is replaced with a NULL value. You need to implement the business requirements to maintain data integrity. What should you do?

A. Create DDL INSERT triggers on the Employee, Task, and Assignment entities.
B. Create CHECK constraints on the TaskID and EmployeeID attributes in the Assignment entity.
C. Create Foreign Keys constraints on the TaskID and EmployeeID attributes in the Assignment entity.
D. Create Foreign Keys constraints on the TaskID and EmployeeID attributes in the Task and Employee entities respectively. Reference the Assignment entity, and specify the appropriate On Delete action.

Answer: C

Question: 6

You have a database that contains two tables named Table1 and Table1_Details. Table1_Details contains details about items in Table1. You need to ensure that when an item is removed from Table1, all related items are removed from. Table1_Details. You must achieve this goal by using the minimum amount of Transact-SQL code. What should you do?

A. Create a foreign key relationship. Set Cascade Delete to Null.
B. Create a foreign key relationship. Set Cascade Delete to True.
C. Create a trigger on Table1_Details that fires on the Delete action.
D. Create a stored procedure that deletes all related items from Table1_Details.

Answer: B

Question: 7

You need to provide a developer the ability to create and modify database diagrams from an existing database by using SQL Server Management Studio. The solution must minimize the amount of permissions assigned to the developer. What should you do?

A. Add the developer to the sysadmin role.
B. Add the developer to the db_owner role.
C. Grant the developer the CREATE TABLE permission only.
D. Grant the developer the CREATE SCHEMA permission only.

Answer: B

Question: 8

You are designing a database for a reporting solution that is based on data from an Online Transaction Processing (OLTP) database. The reports will contain aggregated data. You need to ensure that the reports will not affect query performance on the OLTP database. The solution must minimize the use of joins when performing the aggregate calculations. What should you do?

A. Add a persisted computed column.
B. Create indexed views in the OLTP database.
C. Create partitioned tables in the OLTP database.
D. Create a new denormalized database based on the OLTP database.

Answer: D

Question: 9

You have a legacy application. You do not have access to the application source code. The application has a large denormalized table that contains 100 columns. The application uses stored procedures and views to perform all data manipulation language (DML) activities on the table. You need to optimize the performance of the application to meet the following requirement:

- Reduce I/O
- Minimize the storage requirements
- Optimize insert, update, and delete operations

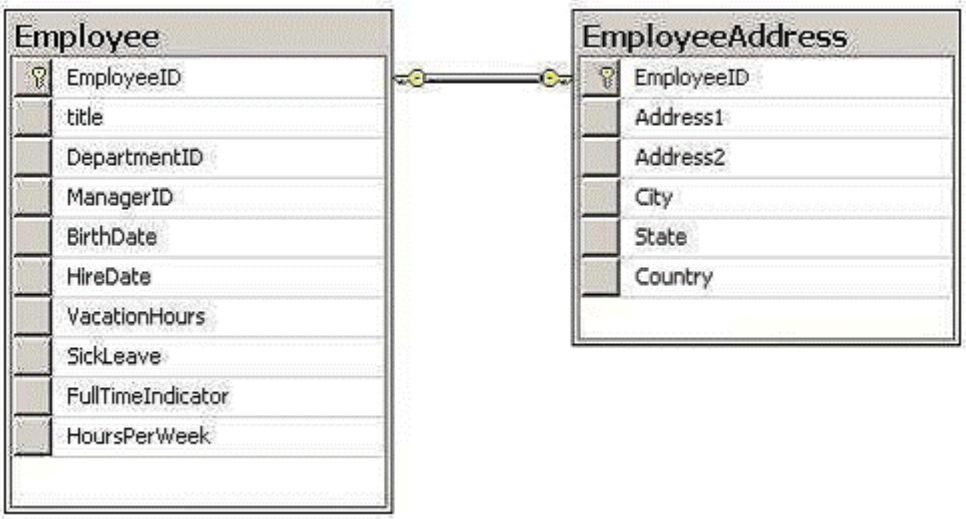
What should you do?

A. Create nonclustered indexes on all columns in the table.
B. Create new stored procedures that use the existing views.
C. Create new views. Perform DML activities against the views.
D. Create smaller tables. Update the views and stored procedures.

Answer: D

Question: 10

You are a database developer. You develop a database application for a SQL Server 2008 instance.



The instance hosts a third-party database. You are not allowed to modify the database schema. The database contains two tables that are as shown in the following diagram. You plan to extract address information about full-time employees based on the FullTimeIndicator flag. You need to design a data access layer to simplify the extraction process. What should you do?

A. Design an Entity Data Model that contains the EMPLOYEES and ADDRESS entities.
B. Create a view on the database to include full-time employees and their address details.
C. Re-design the underlying database model to include employee and address information in one table.
D. Design a conceptual Entity Data Model that contains an entity named EMPLOYEE_ADDRESS. Ensure that this entity contains information about employees and their addresses.

Answer: D

Question: 11

You are a database developer. You develop a task management application that connects to a SQL Server 2008 database named TaskDB. Users log on to the application by using a SQL Server login. The application contains a module named Task that assigns tasks to users. Information about these tasks is stored in the Tasks table of the TaskDB database. The Tasks table contains multiple columns. These include the CloseDate and EstimatedTime columns.

•Users assigned to a database role named User1 can update all task information columns except the CloseDate and the EstimatedTime columns in the Tasks table.

•Administrative users assigned to a database role named Task_Admin can update all task information in the Tasks table.

You need to design a strategy to meet the security requirements. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Add the Task_Admin role to the db_accessadmin fixed database role.
B. Grant Update permissions on the Tasks table to the Task_Admin role.
C. Grant Update permissions on the Tasks table to the User1 role for each column except the CloseDate and EstimatedTime columns.
D. Create an INSTEAD OF trigger on the Tasks Table. Use the Is_Member function to prevent the User1 role from updating the CloseDate and EstimatedTime columns.

Answer: B, C

Question: 12

You have a SQL Server Integration Services (SSIS) package that contains an Execute Process task. You need to schedule the SSIS package to run on a regular basis. What should you do?

A. Create a credential and a login. Configure a SQL Server Agent job to run the package by using the login.
B. Create a credential and a proxy. Configure a SQL Server Agent job to run the package by using the proxy.
C. Create a login and map a user to the login. Add the user to the db_owner role. Configure a SQL Server Agent job to run the package by using the login.
D. Create a login and map the user to a login. Add the user to the db_securityadmin role. Configure a SQL Server Agent job to run the package by using the login.

Answer: B

Question: 13

You plan to deploy a new application.
The application will perform the following operations:

- Create a new database
- Add new logins
- Back up the new database

You need to configure a login to support the deployment of the new application. The solution must ensure that the application uses the most restrictive permissions possible. What should you do?

A. Add the login to the sysadmin server role.
B. Add the login to the dbcreator and securityadmin server roles.

C. Add the login to the diskadmin and securityadmin server roles. Once the database is created, add a user to the db_backupoperator database role.
D. Add the login to the diskadmin and serveradmin server roles. Once the database is created, add a user to the db_backupoperator database role.

Answer: B

Question: 14

You are designing a maintenance strategy for a database that contains several views. The views will be assigned custom permissions. You need to recommend a solution that will allow developers to modify the views without affecting the views' existing permissions. What should you recommend?

A. Create a new view.
B. Alter the existing view.
C. Rename the existing view.
D. Drop the existing view and then recreate the view.

Answer: B

Question: 15

You need to create a Service Broker solution. Which object should you create first?

A. Contract
B. Dialog
C. Message Type
D. Services

Answer: C

Question: 16

You plan to create a Service Broker solution. The solution will transport data from one queue to another queue. You need to identify which message type must be used to transport binary data. The solution must minimize the amount of data transported. Which message type should you use?

A. EMPTY
B. NONE
C. VALID_XML WITH SCHEMA COLLECTION
D. WELL_FORMED_XML

Answer: B

Question: 17

You are a database developer. You plan to design a database solution by using SQL Server 2008. You have a Web site supported by a database that has the full-text search component installed. You plan to create a table named Courses that will have the following structure.

Column Name	Data Type
CourseID	Integer
CourseTitle	Varchar(500)
CourseDescription	Varchar(4000)
AuthorID	Integer

Users of the Web site will search for courses based on the CourseTitle field. You need to construct a full-text query that ensures the following compliances when a user launches the search for a course:

- Rows are returned when the exact search phrase is found.
- Rows are in order of how well they match with the search phrase.

What should you specify in the full-text query?

A. A FREETEXT predicate
B. A CONTAINS predicate
C. A FREETEXTTABLE function
D. A CONTAINSTABLE function

Answer: D

Question: 18

You are a database solutions architect. Your company plans to develop a solution by using a SQL Server 2008 instance. You design a new database that contains a table to store Microsoft Office documents. You have the following business requirements:

- The documents are part of the database backup.
- The snapshots of the database are used.

You need to use an appropriate data type to store the documents.
Which data type should you use?

A. varchar(max)
B. nvarchar(max)
C. varbinary(max)
D. varbinary(max) by using the FILESTREAM attribute

Answer: C

Question: 19

You are a database developer. You plan to design a database solution by using SQL Server 2008. You create a table that contains information about Web pages that are added to a Web site. The Web site has a home page and contains various other Web pages. The home page is the root page of the site. All pages except the root page have a link to an upper-level page.
The table must support the following design considerations:

- Records of the Web pages that are linked to a particular page can be quickly retrieved.
- The position of a Web page in a collection of linked pages can be quickly retrieved.
- Changing the links to the upper-level pages is a rare requirement. You need to ensure that the table is designed appropriately.

What should you use?

A. Use the XML data type.
B. Use the hierarchyid data type.

C. Use a Parent/Child mechanism that references the same table.
D. Use a Parent/Child mechanism that references one or more additional tables.

Answer: B

Question: 20

You are designing a database table for a content management system. Users will store images and videos in the database.You need to ensure that the database can store files that are 20 MB or less. The solution must minimize the amount of space required to store the data. Which data type should you use?

A. binary(20)
B. varbinary(20)
C. varbinary(max)
D. XML

Answer: C

Question: 21

You are designing a data storage solution for a transactional application.You need to ensure that each row in a table records the date and the time that the row was written. The time must be as precise as possible. Which data type should you use?

A. datetime
B. datetime2
C. smalldatetime
D. timestamp

Answer: B

Question: 22

You need to create an application that will represent the relationship between managers and employees. You must achieve this goal by using the minimum amount of tables. What should you do?

A. Create one table that contains the hierarchyid data type.
B. Create one table that contains the uniqueidentifer data type.
C. Create two tables. Establish a foreign key relationship between the tables.
D. Create two tables. Create a trigger that maintains the relationship between the two tables.

Answer: A

Question: 23

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database contains a large table that is infrequently updated. Users execute a query against the table. The query requires the execution of a complex calculation that involves multiple columns for a given row. You discover that the query performance is poor because the query is CPU intensive. You need to reduce the effect of this query on the server. What should you do?

A. Create a computed column on the table.
B. Create a persisted computed column on the table.
C. Create an index on each field used by the calculation.
D. Create a view on the table that includes the calculation.

Answer: B

Question: 24

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database will store multilingual data. The database will contain a table that has 100 million rows. The table will contain 1,000 columns that are based on the nvarchar(max) data type. For each column, only 2 percent of the rows will be populated. You need to design the table to optimize storage space. What should you do?

A. Use row compression.
B. Use NTFS file system compression to reduce the disk space used.
C. Define the columns as sparse columns.
D. Change the column data types to varchar(max).

Answer: C

Question: 25

You are a database developer. You plan to design a database solution by using SQL Server 2008. A table in a database will store large image files (20-50 MB in size).
You have the following business requirements:

- The image files are accessible by applications that use Win32 APIs.
- The image files are part of the database backup.
- You need to identify an appropriate strategy to store the image files.

Which strategy should you use?

A. Use an image data type.
B. Use the varbinary(max) data type.
C. Use the varbinary(max) data type along with the FILESTREAM attribute.
D. Store the image file in a file system. Use a varchar data type to store the file location in the database.

Answer: C

Question: 26

You are designing a document repository application that will contain over 100,000 documents. The repository will have the following specifications:

- Documents can be associated to 30 different properties
- Most documents will have less than 10 properties defined
- You need to design a single table for the application.
- The solution must use the minimum the amount of storage space.

What should you include in the design?

A. an XML data type
B. nvarchar() null
C. sparse columns
D. varchar(max) not null

Answer: C

Question: 27

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database contains two tables named Supplier and Product. There is a foreign key constraint between the Supplier and Product tables on the SupplierID column. The Supplier table contains a row that has the SupplierID value as 0. The 0 value indicates that the supplier is deleted. Certain transactions delete the supplier records from the Supplier table. You need to ensure that if a supplier is deleted, the SupplierID value in the Product table is set to 0. What should you do?

A. Create a FOR DELETE trigger on the Product table that updates the SupplierID value to 0 in the Products table for the deleted supplier.
B. Create a FOR DELETE trigger on the Supplier table that updates the SupplierID value to 0 in the Products table for the deleted supplier.
C. Create a default constraint on the SupplierID column in the Product table that sets the value to 0. Set the ON DELETE property of the foreign key constraint to NULL.
D. Create a default constraint on the SupplierID column in the Product table that sets the value to 0. Set the ON DELETE property of the foreign key constraint to Default.

Answer: D

Question: 28

You are a database developer. You create a database that uses SQL Server 2008 in an enterprise environment. You plan to import data from an external source into a table. You need to ensure that the following tasks are accomplished:

- The import is successfully completed even if it encounters rows that fail foreign key constraints.
- The rows that fail the foreign key constraints during import are inserted into a separate table.

What should you do?

A. Use CHECK constraints.
B. Use an AFTER trigger.
C. Use an INSTEAD OF trigger.
D. Disable the foreign keys during the import process.

Answer: C

Question: 29

You are a database developer for a retail application. You create a database by using SQL Server 2008 in a distributed enterprise environment that has multiple servers. The same database is implemented on all the servers. The database contains a table that has a surrogate key. You need to ensure that the following requirements are met:

- The surrogate key is unique across all servers.
- The index on the surrogate key is not fragmented because of INSERT operations.

What should you do?

A. Use the timestamp data type.
B. Use the bigint data type. Use the IDENTITY property in the column definition.
C. Use the uniqueidentifier data type. Use the NEWID() function in a default constraint.
D. Use the uniqueidentifier data type. Use the NEWSEQUENTIALID() function in a default constraint.

Answer: D

Question: 30

You are designing a database that will store telephone numbers. You need to ensure that only phone numbers that use a specific format are written to the database. What should you create?

A. a CHECK constraint
B. a computed column
C. a DEFAULT constraint
D. a persisted computed column

Answer: A

Question: 31

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. 1.Start a transaction in the TRY block.
2. After each step, insert log entries into the dbo.ExecutionLog table.
3. In the CATCH block, commit the transaction.
4. After the CATCH block, use data in the dbo.ExecutionLog table to reverse any changes made to the target tables.
5. Commit the transaction if one exists.
B. 1. Start a transaction in the TRY block.
2. Before each step, define a transactional save point.
3. After each step, insert log entries into the dbo.ExecutionLog table.
4. In the CATCH block, roll back to the transactional save points.
5. After the CATCH block, commit the transaction.
C. 1. Define a temporary table before the TRY block by using the same columns as that of the dbo.ExecutionLog table.
2. Start a transaction in the TRY block.
3. After each step, insert log entries into the temporary table.
4. In the CATCH block, roll back the transaction.
5. After the CATCH block, insert the rows from the temporary table into the dbo.ExecutionLog table.
6. Commit the transaction if one exists.
D. 1. Define a table variable before the TRY block by using the same columns as that of the dbo.ExecutionLog table.

2. Start a transaction in the TRY block.
3. After each step, insert log entries into the table variable.
4. In the CATCH block, roll back the transaction.
5. After the CATCH block, insert the rows from the table variable into the dbo.ExecutionLog table.
6. Commit the transaction if one exists.

Answer: D

Question: 32

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.
C. Create the procedure by using the EXECUTE AS OWNER option.
D. Create the procedure by using the EXECUTE AS USER=MarketingUser option.

Answer: A

Question: 33

You have an instance of SQL Server 2008 that has xp_cmdshell enabled. You need to design a stored procedure that meets the following requirements:

- Allows authorized users to retrieve lists of files
- Minimizes permissions assigned to objects
- Minimizes security risks

What should you include in the design?

A. Grant users permission to execute xp_cmdshell.
B. Grant users permission to execute sp_configure.
C. Create a procedure that uses EXECUTE AS OWNER. Call xp_cmdshell in the procedure. Grant users permission to execute the procedure.
D. Create a procedure that uses EXECUTE AS CALLER. Call xp_cmdshell in the procedure. Grant users permission to execute the procedure.

Answer: C

Question: 34

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.

Answer: C

Question: 35

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.

Answer: B

Question: 36

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

Answer: A

Question: 37

You have a table that has 10 million rows. The table has a view that returns all of the rows.
You discover performance degradation when you run an unfiltered view. You need to recommend a solution to replace the view. The solution must require that the returned data is filtered by a parameter. What should you use?

A. an indexed view
B. a scalar function
C. a table-valued function
D. a table-valued type

Answer: C

Question: 38

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. 1. Ensure that the logic of the function returns the same value for the same input values and the same database state.
2. Ensure that the IsDeterministic property is set to True.
B. 1. Ensure that the logic of the function returns a different value for the same input values and the same database state.
2. Ensure that the IsDeterministic property is set to True.
C. C. 1. Ensure that the logic of the function returns the same value for the same input values and the same database state.
2. Ensure that the IsDeterministic property is set to False.
D. D. 1.•Ensure that the logic of the function returns a different value for the same input values and the same database state.
2. Ensure that the IsDeterministic property is set to False.

Answer: A

Question: 39

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.

Answer: D

Question: 40

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.

Answer: B

Question: 41

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 tabled 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.

Answer: C

Question: 42

You need to configure a security solution for an application. The solution must meet the following requirements:

- The application must have access to tables in a database
- The tables must only be accessed through the application
- Database access must not require a password

What should you create?

A. a database user that has no login

B. a new login that has a blank password
C. an application role
D. a proxy object

Answer: A

Question: 43

You are a database developer. You create a database by using SQL Server 2008 in an enterprise environment. The database contains two stored procedures named ModifySales and RetrieveSalesTrend. The ModifySales stored procedure uses a transaction that updates a table named SalesOrders. The RetrieveSalesTrend stored procedure retrieves and aggregates data from the SalesOrders table for a sales trend analysis report. Both stored procedures are executed frequently each day. Users report a considerable wait time while they run the sales trend analysis report. You need to ensure that sales trend analysis report runs as quickly as possible. What should you do?

A. Change the isolation level to SERIALIZABLE for ModifySales.
B. Change the isolation level to READ UNCOMITTED for ModifySales.
C. Add the NOWAIT hint to the SELECT statement in RetrieveSalesTrend.
D. Add the NOLOCK hint to the SELECT statements in RetrieveSalesTrend.

Answer: D

Question: 44

You are a database developer. You plan to create a database by using SQL Server 2008. A database contains a table named Sales. The Sales table contains customer order summary information. You create a stored procedure that uses a SELECT statement. At the moment of execution, the procedure must return a precise summation of the total sales for the current day. You need to use a query hint to prevent any data modification in the Sales table when the stored procedure is being executed. Which query hint should you recommend?

A. READPAST
B. HOLDLOCK
C. TABLOCKX
D. READCOMMITTED

Answer: C

Question: 45

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database contains a table named Products. The database has two stored procedures named ModifyProduct and RetrieveProducts. ModifyProduct updates a single row in the Products table. RetrieveProducts returns all rows from the Products table. RetrieveProducts is used by a report. Users who run the report experience contention problems. You discover that RetrieveProducts is being blocked by ModifyProduct. The report must not include rows that are currently being modified. You need to ensure that the report is executed as quickly as possible. Which locking hint should you use in RetrieveProducts?

A. NOLOCK
B. NOWAIT

C. READPAST
D. READUNCOMMITTED

Answer: C

Question: 46

You have a stored procedure that is used to set up maintenance tasks. The stored procedure executes every night. The stored procedure contains three critical data manipulation language (DML) statements that operate against a single table. You need to prevent users from modifying any data in the table while the stored procedure executes. Which locking hint should you use?

A. NOLOCK
B. READCOMMITTED
C. REPEATABLEREAD
D. TABLOCKX

Answer: D

Question: 47

You are a database developer. You develop solutions by using SQL Server 2008 in an enterprise environment. An application contains two stored procedures. The tasks performed by the stored procedures are as shown in the following table.

Name of the Stored Procedure	Tasks Performed by the Stored Procedure
ImportNewProducts	• Begins a transaction. • Executes IncludeDetails. • Inserts data into the ProductCurrentPrice table. • Commits the transaction.
IncludeDetails	• Begins a transaction. • Inserts data into the ProductHeader table. • Inserts data into the ProductInfo table. • Commits the transaction.

You discover that the procedures occasionally throw foreign key violation errors. IncludeDetails throws an error when it inserts records into the ProductInfo table. ImportNewProducts throws an error when it inserts records into the ProductCurrentPrice table. If an error occurs in the INSERT statement of ProductInfo, records inserted into ProductHeader and ProductCurrentPrice are committed. If an error occurs in the INSERT statement of ProductCurrentPrice, all transactions are rolled back. What should you do?

A. 1. Add a SET XACT_ABORT OFF statement in IncludeDetails.
2. Add a SET XACT_ABORT ON statement in ImportNewProducts.
B. 1. Add a SET XACT_ABORT ON statement in IncludeDetails.
2. Add a SET XACT_ABORT OFF statement in ImportNewProducts.
C. 1. Enclose all statements of IncludeDetails in a TRY/CATCH block.
2. Add a ROLLBACK TRANSACTION statement in the CATCH block.
D. 1. Enclose all statements of ImportNewProducts in a TRY/CATCH block.
2. Add a ROLLBACK TRANSACTION statement in the CATCH block.

Answer: A

Question: 48

You are a database developer. You develop solutions by using SQL Server 2008 in an enterprise environment. You are creating a SQL Agent job that uses Transact-SQL to update data in two related databases on two different servers. You have the following requirements:

- The job can only execute once each evening.
- The databases on each server use the full-recovery model.
- Transaction log backups for the two databases occur at different times.
- The job uses transactions to ensure that in the event of an error, all updates are rolled back. You need to ensure that when you restore a database on either server, the two databases are restored to a state that reflects the last time the job successfully executed. What should you do?

A. Ensure both databases are altered using the NO_WAIT termination clause.
B. Use the Windows Sync Manager to ensure that the databases can never be out of synchronization.
C. Use saved transactions. When a database failure occurs, restore both databases by using a saved transaction.
D. Use marked transactions. When a database failure occurs, restore both databases by using a marked transaction.

Answer: D

Question: 49

You are a database developer. You plan to design a database solution by using SQL Server 2008. A frequently used query takes very long to execute. You discover that the query frequently uses full-table scans instead of indexes. This causes other queries that modify the table to be blocked. The indexing strategy on the underlying tables that the query uses can change. You need to design a solution that performs the following tasks:

- Removes full-table scans
- Allows the query optimizer to select the appropriate index.

What should you do?

A. Use the INDEX table hint.
B. Use the INDEX(0) table hint.
C. Use the NOEXPAND table hint.
D. Use the FORCESEEK table hint.

Answer: D

Question: 50

You are a database developer. You develop a database by using SQL Server 2008 in an enterprise environment. The database has a table named Sales.Inventory. The table is partitioned into four geographic regions. You update the Sales.Inventory table for each region by using the following stored procedure.

```
CREATE STORED PROCEDURE usp_Update
@RegionID tinyint
AS
UPDATE Sales.Inventory
SET Qty = T.CurrentQuantity
```

FROM Sales.Inventory I
JOIN Sales.TempData T ON I.ItemID = T.ItemID
AND I.RegionID = @RegionID;
The UPDATE statement locks the Sales.Inventory table when a single region is updated. You need to prevent the locking of the Sales.Inventory table when a single region is updated. What should you do?

A. Modify the usp_Update stored procedure to use the NOLOCK table hint for the UPDATE statement.
B. Modify the usp_Update stored procedure to use the SERIALIZABLE table hint for the UPDATE statement.
C. Run the following Transact-SQL statement.
ALTER TABLE Sales.Inventory SET LOCK_ESCALATION = AUTO
D. Run the following Transact-SQL statement.
ALTER TABLE Sales.Inventory SET LOCK_ESCALATION = TABLE

Answer: C

Question: 51

You are a database developer. You plan to design a database solution by using SQL Server 2008. A stored procedure in a database uses a transaction to retrieve data from a table and produces aggregations.
You must design a solution that meets the following requirements:

- Update operations cannot be performed on the retrieved data while the stored procedure is being executed.
- Insert operations in the table can be performed while the stored procedure is being executed.

You need to ensure that the solution meets the requirements. What isolation level should you use?

A. SERIALIZABLE
B. READ COMMITTED
C. REPEATABLE READ
D. READ UNCOMMITTED

Answer: C

Question: 52

You have a database that contains two tables. Both the XACT_ABORT database option and the IMPLICIT_TRANSACTIONS database option are set to OFF. You need to update both tables. If an update fails on either table, neither table should be updated. What should you do?

A. Use a transaction.
B. Change the isolation level.
C. Use the TABLOCK query hint.
D. Use the UPDLOCK query hint.

Answer: A

Question: 53

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.

Answer: D

Question: 54

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.

Answer: B

Question: 55

You are designing a database that contains a data definition language (DDL) trigger. The DDL trigger will provide the maximum amount of data available when any attempt is made to change the database schema. You need to design a table to meet the following requirements:
Accept the EVENTDATA information that is provided by the trigger Support the searching and retrieval of nodes and values Minimize development time
Which data type should you use?

A. nvarchar(max)
B. varchar(max)
C. varbinary
D. XML

Answer: D

Question: 56

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.

Answer: A

Question: 57

Your company has the following development policy for XML data:
- The data must be element-centric
- The data must be well-formed XML
- The data must have a root element
- The data must contain the parent table name

You need to recommend guidelines for generating well-formed XML result sets. What should you recommend?

A. FOR XML AUTO
B. FOR XML PATH
C. OPENXML ( )
D. XQUERY

Answer: B

Question: 58

You have a table that has five varchar columns. You are designing an application that requires data in well-formed XML. You need to design a query statement that will produce the data in well-formed XML. What should you use?

A. FOR XML PATH
B. sp_xml_preparedocument
C. XPATH query

D. XSD schema

Answer: A

Question: 59

You plan to implement a Web-based application that will save XML data to a column in a table. You need to design a query that ensures that before saving the XML data to the table, the data contains valid elements. The solution must be developed by using the minimum amount of effort. What should you include in the query?

A. .exist()
B. .query()
C. FOR XML PATH
D. sp_xml_preparedocument

Answer: A

Question: 60

You have a table that has an XML column named XMLOrderHeader. You need to design a stored procedure that extracts the order header values and stores them in a table. The solution must meet the following requirements:

- Extract many values
- Minimize the development effort

What should the solution include?

A. Use a single Exists() method.
B. Use a single XPATH statement.
C. For each value, use the Exists() method.
D. For each value, use an XPATH statement.

Answer: D

Question: 61

You need to design a method for storing large XML-formatted data. The design must meet the following requirements:

- Minimize the page I/O
- Minimize the response time for data manipulation language (DML) queries

What should you do?

A. Store the XML data by using the filestream data type.
B. Store the XML data by using the nvarchar(max) data type.
C. Create columns based on XML elements. Shred the XML data into the individual columns.
D. Create columns based on Extensible Stylesheet Language Transformations (XSLT). Store the XML data by using the XML data type.

Answer: C

Question: 62

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.

Answer: C

Question: 63

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:

- Department
- Class
- Item
- Quantity

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.

Answer: D

Question: 64

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database will contain a table that has a parent-child relationship to itself. Each child might also be a parent. This might exist up to 10 levels deep. You need to retrieve all levels by using a single Transact-SQL query. What should you do?

A. Write a query to return the first level, and then add a correlated subquery to get the remaining levels.
B. Write a query to return the first level, and then use the CROSS JOIN operator to join the table back to itself to get the remaining levels.
C. Create a common-table expression to return the first level and then union back to itself to get the remaining levels.
D. Create a view that returns the first level, and then use the FULL OUTER JOIN operator to join the table back to the view to get the remaining levels.

Answer: C

Question: 65

You have a table named Table1. A sample of the data in Table1 is shown in the following table.

SalesID	SalesOrderNumber
1	SO2159
2	SO2768
3	SO3978
4	SO3010
5	SO4818
6	SO3919
7	SO3999

There is a defined nonclustered index on the SalesOrderNumber column.
The following query executes against the table.
WHERE `SO3' = LEFT (SalesOrderNumber,3)
You need to minimize the amount page I/O that is generated when the query runs.
What should you do?

A. Use a query hint.
B. Add a non-filtered index.
C. Rewrite the WHERE clause to use a LIKE statement.
D. Rewrite the WHERE clause to use a substring function on the SalesOrderNumber column.

Answer: C

Question: 66

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database has a table named Sales. The Sales table contains 10 million rows.
You discover that the following query takes a long time to execute.
SELECT s.sale_id,...
FROM Sales AS s
JOIN Country AS c
ON s.Country_id = c.Country_id
AND c.Country_name = 'USA'
A summary of the execution plan is as shown in the following code segment. |--Hash Match(Inner Join, HASH: ([s].[Country_id]) = ([c].[Country_id]) |--Clustered Index Scan(OBJECT:([Country].[PK_Country_Country_id] AS [c]) |--Clustered Index Scan(OBJECT:([Sales].[PK_Sales_Sale_id] AS [s]))
You need to ensure that the query retrieves data in minimum possible time.
What should you do?

A. Modify the query to use a loop join hint.
B. Modify the query to use a merge join hint.
C. Create a nonclustered index in the Country_id column of the Sales table.
D. Create a nonclustered index in the Country_name column of the Country table.

Answer: C

Question: 67

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database application has a table named Transactions that contains millions of rows. The table has multiple columns that include transaction_id and transaction_date. There is a clustered index on the transaction_id column. There is a nonclustered index on the transaction_date column. You discover that the following query takes a long time to execute.

```
SELECT transaction_id, transaction_date, transaction_notes
FROM transactions
WHERE transaction_type_id = 'FXO'
AND transaction_date between @start_date and @end_date
```

The summary of the execution plan is as shown in the following code segment.

```
|--Filter(WHERE:([transaction_type_id]='FXO')
   |--Nested Loops(Inner Join)
      |--Index Seek(OBJECT:([transactions]. [nc_transactions_transaction_date])
         |--Clustered Index Seek(OBJECT:([transactions]. [PK_transactions_transaction_id])
```

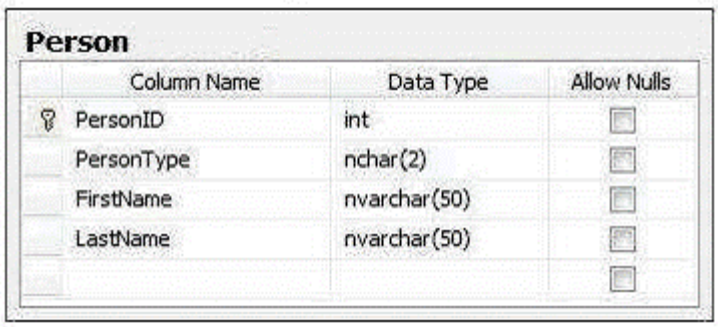
You need to ensure that the query retrieves data in minimum possible time. What should you do?

A. Create a nonclustered index on the transaction_type_id column.
B. Create a nonclustered index on the transaction_date and transaction_type_id columns.
C. Create a nonclustered index on the transaction_date column and include the transaction_type_id and transaction_notes columns.
D. Create a nonclustered index on the transaction_date and transaction_type_id columns and include the transaction_notes column.

Answer: D

Question: 68

You are a database developer. You plan to design a database solution by using SQL Server 2008. A database contains a table named Person. The structure of the table is as shown in the following exhibit. (Click the Exhibit button.)



The table has the following indexes:
A unique clustered index on the PersonID column named IX_Person_PersonID A nonclustered index on the FirstName and LastName columns named IX_Person_FirstName_LastName
A nonclustered index on the PersonType column named IX_Person_PersonType that has FirstName and LastName as included columns The table contains approximately 700,000 records. The approximate number of records for each PersonType is 3,000.
You execute the following query.
SELECT P.FirstName, P.LastName
FROM Person P

WHERE P.PersonType = 'DR'
You plan to analyze the performance of the query by using an execution plan. You need to ascertain that the indexes are used optimally. What should you do?

A. Verify that a clustered index scan operation is performed on the IX_Person_PersonID index.
B. Verify that an index seek operation is performed on the IX_Person_PersonType index.
C. Verify that an index seek operation is performed on the IX_Person_PersonType index, and a key lookup operation is performed on the IX_Person_PersonID index.
D. Verify that an index seek operation is performed on the IX_Person_PersonType index, and an index scan operation is performed on the IX_Person_FirstName_LastName index.

Answer: B

Question: 69

You are a database developer. You plan to design a database solution by using SQL Server 2008. A database will contain 10 tables that are used to generate reports. Data in the tables ranges from 50,000 to 100,000 records.
During a query execution that joins four tables, you discover the following problems:

- The size of the tempdb database grows considerably.
- The query execution time is excessive.

You need to identify the most likely cause for the problems by analyzing the execution plan.
What should you do?

A. Look for table scans in the execution plan.
B. Look for Merge Join operators in the execution plan.
C. Look for Hash Match operators in the execution plan.
D. Look for Nested Loops operators in the execution plan.

Answer: C

Question: 70

You are a database developer. You plan to design a database solution by using SQL Server 2008. Account managers in your company store order data in a database. Your company requires a list of customers for each account manager. The list must be sorted in the descending order of the order amount. You create a query that generates the list at the end of each month. You need to ensure that the query executes as quickly as possible. What should you do?

A. Create a cursor that returns each account manager, and then sort the order data by order amount.
B. Use a SELECT statement that uses the OVER clause to rank the customers by order amount for each account manager.
C. Create a correlated subquery to return the order amount for each account manager. Sort the results first by account manager and then by order amount.
D. Create a table-valued function that returns the order amount for a specific account manager, and then create a query by using the CROSS APPLY clause to list each account manager. Sort the results first by account manager and then by order amount.

Answer: B

Question: 71

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.

Answer: B

Question: 72

Users frequently update millions of rows in a table at a time. Users report that it takes a long time to update the rows. You need to recommend a solution to reduce the time it takes to update the rows. The solution must be developed in the minimum amount of time. What should you do?

A. Use a table variable.
B. Use a temporary table.
C. Split the update operation into small batches.
D. Use the NOLOCK optimizer hint and use a single transaction.

Answer: C

Question: 73

You have a stored procedure that uses a cursor. The stored procedure updates several related tables. You discover that the stored procedure runs slowly and uses a significant amount of resources on the database server. You need to recommend changes to the stored procedure to meet the following requirements:

- Minimize execution time
- Minimize development effort
- Minimize server resource requirements

What should you recommend?

A. Change the cursor to a dynamic cursor.
B. Change the cursor to a client-side cursor.
C. Rewrite the cursor by using set-based operations.
D. Rewrite the cursor by using recursive CLR stored procedure.

Answer: C

Question: 74

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database contains a table named Claims. The structure of the Claims table is as shown in the following table.

Column Name	Description	Constraint
open_date	Claim received date	Does not allow the NULL value
close_date	Claim settled date	Allows the NULL value
status	• Set as **Open** when the claim is received • Set as **Closed** when the claim is settled	–

Only two percent of the claims are open at any point in time. You discover that queries on claims that have an Open status take a long time to execute. You need to optimize the performance of the claim-processing queries. What should you do?

A. Use a partitioning function to partition the Claims table on the open_date column.
B. Create a view for the Claims table by using a WHERE clause to include all rows that have a NULL value in the close_date column.
C. Create an index for the Claims table by using a WHERE clause to include all rows that have a NULL value in the close_date column.
D. Create a table-valued function for the Claims table by using a WHERE clause to include all rows that have a NULL value in the close_date column.

Answer: C

Question: 75

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database will contain information on retail sales transactions of more than 500 stores. The marketing department uses the solution to analyze daily sales patterns for each store. Users report that the solution takes a long time to retrieve the required data. You need to ensure that the solution provides results in the minimum possible time. What should you do?

A. Create a nonclustered index on a view of the sales transactions.
B. Create a covering index on a view that aggregates the sales transactions.
C. Create a clustered index on a view that aggregates the sales transactions.
D. Create a nonclustered index on a view that aggregates the sales transactions.

Answer: C

Question: 76

You have a table that contains 5 million rows. The table has a clustered index. You plan to add an additional index on a column that contains 80 percent null values. The column is used extensively in WHERE clauses. You need to implement an index strategy for the column. The solution must minimize the amount of storage space required for the index. Which type of index should you use?

A. clustered
B. filtered
C. nonclustered
D. unique

Answer: B

Question: 77

You have a table named Books that contains information about books. Books has the columns in the following table.

Column	Data type	Primary key	Indexed	Index type
BookId	int	Yes	Yes	nonclustered
Title	nvarchar(50)	No	No	-
ISBN	nvarchar(10)	No	No	-
Description	nvarchar(400)	No	No	-

You plan to create several queries that will filter on Title and ISBN. The queries will return values from Title, ISBN, and Description.

You need to recommend an indexing solution to meet the following requirements:

- Minimize the amount of time required to return the results of the planned queries
- Minimize the number of Indexes

What should you recommend?

A. Create a nonclustered index on each column.
B. Create a clustered index on Title, ISBN and Description as the key value.
C. Create a clustered index on Title and ISBN and set the index fill factor to 75.
D. Create a nonclustered index on Title and ISBN and include the Description column.

Answer: D

Question: 78

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database supports a Web site and captures user interactions. These interactions are stored in the Activity table of the User_Activity database. Data older than six months is archived to the Activity table of the Archive_Activity database on a different instance of SQL Server 2008. The structure of the Activity table is as shown in the following table.

Column	Data Type	Description
activity_id	bigint	Primary Key
activity_date	datetime	Date and time of activity
activity_type_id	int	Identifies the type of activity
advert_id	int	Identifies the advertisements
user_id	int	Identifies the user

You plan to design a solution that allows a single query to generate a report that summarizes user interactions for the last 12 months. You need to ensure that the solution is implemented. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Create a partition function and a partition scheme.
B. Modify the Activity tables to use the partition scheme.
C. Move the archived data back to the User_Activity database.
D. Create a view by using the UNION ALL clause to retrieve data from the two Activity tables.

E. Create CHECK constraints on the two Activity tables to limit the values in the activity_date column to an exclusive range.

Answer: D, E

Question: 79

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database supports a warehousing application and contains data from two warehouses in a table named Product. The Product table contains a warehouse indicator field named warehouse_id.
The two Warehouse B contains 55,000 items.
The solution uses a third-party application that runs on SQL Server 2008. The application uses a stored procedure that returns the warehouse inventory based on the warehouse_id parameter. Users report that occasionally, the system performance is unacceptable when the Warehouse A inventory is queried. You cannot modify the stored procedures in the application. You need to ensure acceptable performance when users query the inventory of Warehouse A. What should you do?

A. Create a clustered index on the warehouse_id column.
B. Create a nonclustered index on the warehouse_id column.
C. Create a plan guide that sets the MAXDOP query hint to 1.
D. Create a plan guide that uses the OPTIMIZE FOR clause for Warehouse A.

Answer: D

Question: 80

You are a database developer. You plan to design a database solution by using SQL Server 2008. You plan to design a complex multi-statement stored procedure in the following manner.

```
CREATE PROCEDURE Sales.GetCustomerActivity
@StartDate datetime
AS
SELECT order_id, order_date, customer_id
FROM Sales.Orders
WHERE order_date >= @StartDate
...
```

On testing, you discover that the stored procedure occasionally takes a longer than expected time to execute.
You discover that this degradation is caused by the first statement in the stored procedure. You need to ensure that the stored procedure is consistently executed in the minimum possible time. What should you do?

A. Run the EXEC sp_recompile GetCustomerActivity command.
B. Create a plan guide to apply the OPTION (RECOMPILE) clause to the first statement.
C. Modify the stored procedure by adding the WITH RECOMPILE clause.
D. Replace the first statement in the stored procedure with the following Transact-SQL statement.
UPDATE STATISTICS Sales.GetCustomerActivity WITH RESAMPLE

Answer: B

Question: 81

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database will contain three tables. The structure of the three tables is as shown in the following table.

Table Name	Column Types	Volume of Duplicate Data
Table1	The integer data type	Small
Table2	The varchar data type	Large
Table3	The integer and varchar data types	Large

You need to minimize disk space usage without altering the data types in the tables of the database. What should you do?

A. Implement row-level compression on all tables.
B. Implement row-level compression on Table1 and page-level compression on Table2 and Table3.
C. Implement row-level compression on Table2 and page-level compression on Table1 and Table3.
D. Implement row-level compression on Table3 and page-level compression on Table1 and Table2.

Answer: B

Question: 82

You are designing a database that will be used for reporting purposes. You need to minimize the data storage requirements and improve the application response time. What should you recommend?

A. row compression
B. sparse columns
C. table partitioning
D. XML

Answer: A

Question: 83

You are a database developer. You plan to design a database solution by using SQL Server 2008. A database contains a table that has a column defined as a smallint data type. The table is partitioned on has boundaries of 100 and 1,000. The table must be altered to contain the following partitions:
< 100
>= 100 and < 400
>= 400 and < 700
>= 700 and < 1000
>= 1000
You need to alter the partition function to provide the required partitions. Which code fragment should you use?

A. ALTER PARTITION FUNCTION MyRangePF1 () SPLIT RANGE (399); GO ALTER PARTITION FUNCTION MyRangePF1 () SPLIT RANGE (699); GO
B. ALTER PARTITION FUNCTION MyRangePF1 () SPLIT RANGE (400); GO ALTER PARTITION FUNCTION MyRangePF1 () SPLIT RANGE (700); GO
C. DROP PARTITION FUNCTION myRangePF1; GO
CREATE PARTITION FUNCTION myRangePF1 (smallint)
AS RANGE RIGHT FOR VALUES (99, 399, 699, 999);
D. DROP PARTITION FUNCTION myRangePF1; GO

```
CREATE PARTITION FUNCTION myRangePF1 (smallint)
AS RANGE LEFT FOR VALUES (100, 400, 700, 1000);
```

Answer: B

Question: 84

You are designing a table that will store transactions for an online retailer. You anticipate that the online retailer will have an average of 500,000 transactions per day. You need to design a solution for data aging and archiving. The solution must minimize the amount of time it takes to return query results for active data. What should you implement?

A. a linked server
B. a table schema
C. Service Broker
D. table partitioning

Answer: D

Question: 85

You have a database that has 20 large tables. All the tables have qualified indexes. As the tables grow, you discover that queries that contain JOIN statements execute more slowly. You need to recommend a solution to decrease the query response time and the I/O. The solution must minimize hardware costs. What should you recommend?

A. Implement query hints.
B. Create a filegroup strategy.
C. Implement an index strategy.
D. Create a partitioning strategy.

Answer: D

Question: 86

You are designing a table to store date and time information for an application. The application will be used by users in Europe, Asia, and North America. You need to add a column that stores the date and time information for all users. The column must contain information that can be used to identify the users' local time zone. What should you include in the design?

A. a sysdatetimeoffset function
B. a getutcdate function
C. a datetime2 data type
D. a datetimeoffset data type

Answer: D

Question: 87

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database contains

a table named SaverPlans that stores information about savings plans. The table contains a column named MinBalance that stores the minimum balance for a given plan. You need to ensure that each new savings plan, for which the MinBalance value is unspecified, has a minimum balance of 1,000 U.S. dollars. You want to achieve this goal by using the minimum amount of cost. What should you do?

A. Use the DEFAULT constraint.
B. Use an UPDATE trigger.
C. Use the CHECK constraint.
D. Use an INSERT trigger.

Answer: D

Question: 88

You are a database developer. You plan to design a database solution by using SQL Server 2008. A database contains two tables named Orders and OrderDetails. There is also a data warehouse containing a table named factSales. The factSales table has a de-normalized structure and contains columns from Orders and OrderDetails. You plan to design a solution that will extract all data modifications from Orders and OrderDetails and load them into factSales.
You have the following requirements:

- The load operation is incremental and runs daily.
- The schema of the tables cannot be modified.
- The history of each modification is maintained for one month.

You need to implement the solution by using the least amount of coding and administrative effort. What should you do?

A. Use the SQL Server Change Data Capture feature.
B. Partition the Orders and OrderDetails tables based on date.
C. Use the SQL Server Change Tracking feature.
D. Use Microsoft Sync Services.

Answer: A

Question: 89

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database will contain a table to stage data from an external source. The imported data will contain a field named TransactionTime. The TransactionTime field will use the hh:mm:ss.[m] format (such as 12:55:30.1).
You need to select the appropriate data type for the TransactionTime field. You want to achieve this goal by incurring minimum amount of storage cost. Which data type should you use?

A. time
B. datetime2
C. smalldatetime
D. time (1)

Answer: D

Question: 90

You are designing a table that will contain the columns in the following table.

Column	Description
Invoice#	Unique number
Subtotal	Subtotal of sale
TaxAmt	Taxes
FreightAmt	Shipping charges

You need to add a column that will display the sum of the Subtotal, TaxAmt, and FreightAmt columns. The solution must minimize the amount of storage space required to store the table.
What should you create?

A. a column that uses the numeric data type
B. a computed column
C. a persisted computed column
D. a column that uses the money data type

Answer: B

Question: 91

You plan to deploy a new application. The application will perform the following operations:

- Create a new database
- Back up the new database

You need to configure a login to support the deployment of the new application. The solution must ensure that the application uses the most restrictive permissions possible. What should you do?

A. Add the login to the sysadmin server role.
B. Add the login to the diskadmin and securityadmin server roles. After the database is created, add a user to the db_backupoperator database role.
C. Add the login to the dbcreator server role.
D. Add the login to the diskadmin and serveradmin server roles. After the database is created, add a user to the db_backupoperator database role.

Answer: C

Question: 92

You have a server that runs SQL Server 2008. The server supports an online application. New products are constantly being added to a database stored on the server. You identify the following:

- Searches often take too long
- Users cannot search by using multiple criteria
- Users cannot adequately search product descriptions
- Most queries that search the product descriptions use "LIKE *%...%"' as the filter predicate

You need to recommend a search process that meets the following requirements:

- Reduces the amount of time it takes to return search results
- Enables users to filter searches by using multiple criteria
- Enables users to search product descriptions

- Minimizes administrative effort
- Minimizes development costs

What should you do?

A. Create a stoplist that contains the product descriptions.
B. Create a nonclustered index and include the product description.
C. Create filtered indexes on the product description.
D. Implement Full-Text Search.

Answer: D

Question: 93

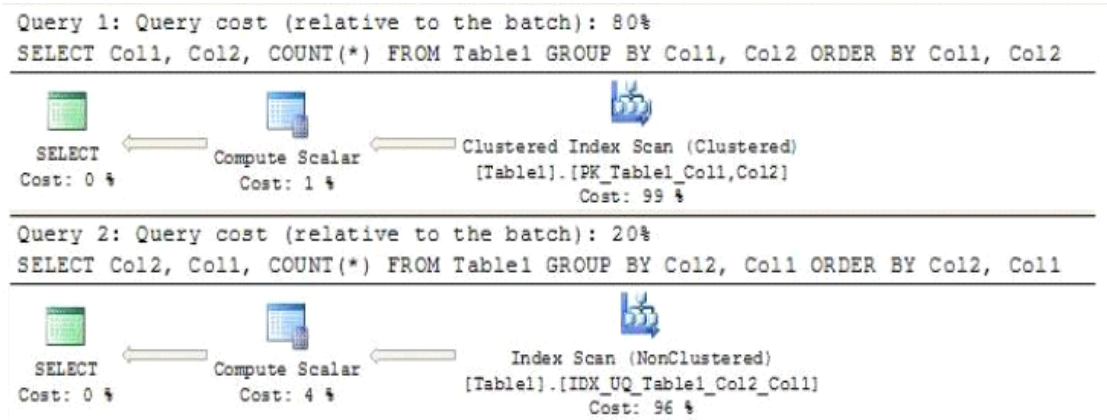
You review the execution plan for a query that contains a join. The execution plan contains a RID Lookup. You need to reduce the I/O that is generated by the RID Lookup. Which index should you create?

A. unique nonclustered
B. clustered
C. nonunique covering
D. Full-Text-Search

Answer: B

Question: 94

You have an execution plan as shown in the exhibit. (Click the Exhibit button.)



The indexes and keys for the table are as follows:

- Unique index on Col1 and Col2
- Primary key of table not modifiable
- Clustered primary key on Col1 and Col2

You need to recommend changes to the table to minimize the response time for both queries.
What should you do?

A. Include all the columns of the table in the existing nonclustered index.
B. change the order of the columns in the existing nonclustered index.
C. Add a unique nonclustered index to Col1 and Col2.
D. Remove the nonclustered index.

Answer: C

Question: 95

You have a server that runs SQL Server 2008 Enterprise. You have a query that contains SUM, AVG, and MAX functions. You discover that the query takes a long time to execute. You need to reduce the amount of time required to execute the query. What should you do?

A. Add computed columns that have persisted values to the table that contains the aggregate values on a per row basis.
B. Create an indexed view in which each aggregate function is computed.
C. Add computed columns to the table that contains the aggregate values on a per row basis.
D. Create a view in which each aggregate function is computed.

Answer: B

Question: 96

You have production tables that are based on data from staging tables. You plan to create stored procedures that will perform the following actions on the production tables:

- Insert new rows
- Update existing rows
- Ignore duplicate rows
- Maintain data integrity
- Create an audit trail of all operations

You need to develop a strategy for the planned stored procedures to minimize locking operations. The solution must be developed by using use the minimum amount of effort. What should you use?

A. Transactions that have the READ UNCOMMITTED isolation level
B. Transactions that have SERIALIZABLE isolation level
C. a MERGE statement that uses a READCOMMITTEDLOCK table hint
D. a MERGE statement that uses the OUTPUT clause

Answer: D

Question: 97

You need to design a stored procedure that contains a transaction. If an error condition causes the transaction to roll back, a temporary result set must be available to the query that follows the failed transaction. Which temporary storage object should you use?

A. a temporary table
B. a derived table
C. a table variable
D a common table expression (CTE)

Answer: C

Question: 98

You are a database developer. You plan to design a database solution by using SQL Server 2008. Users report poor performance of a long-running query in a database. You fail to detect the cause of poor performance when you examine the estimated execution plan. On viewing the actual execution plan, you discover that several tasks are CPU-intensive. You need to ensure that you can view an estimated execution plan containing the most likely actions. You want to achieve this goal by incurring minimum possible CPU overhead. What should you do?

A. Rebuild all indexes.
B. Use the SET STATISTICS PROFILE ON statement.
C. Use the SET STATISTICS XML ON statement.
D. Update statistics on the appropriate tables.

Answer: D

Question: 99

You have a database that has 20 tables. The tables are not configured to have any referential integrity. All tables have primary keys. Each table contains over 5 million rows. Ten percent of the rows contain outdated information. You need to design a maintenance process to delete all outdated rows. The solution must meet the following requirements:

- Minimize execution time
- Minimize development effort
- Minimize blocking other processes
- Prevent deletion failures from affecting the entire deletion process

What should the design include?

A. a WHILE loop that contains a single DELETE statement
B. multiple TRUNCATE TABLE statements
C. a single transaction that contains multiple DELETE statements
D. an IF statement that contains a single DELETE statement

Answer: A

Question: 100

You are creating a new update query. You need to ensure that the query terminates if a shared lock is encountered white the data is updating. What should you include in the query?

A. WITH (NOWAIT)
B. sp_who
C. OPTION (MERGE JOIN)
D. sp_lock

Answer: A

Question: 101

You are a database developer. You plan to design a database solution by using SQL Server 2008. A database contains a large non-partitioned table with 4 million rows. You write a stored procedure that updates approximately 4,000 rows

in the table. The stored procedure is scheduled to run only during peak hours. The stored procedure runs frequently. Users report performance issues. You discover that when the stored procedure runs, it results in memory contention because of a high number of locks placed on the table. You need to ensure that the SQL Server 2008 server places the minimum possible number of locks on the table while the stored procedure is being executed. What should you do?

A. set the LOCK_ESCALATION option of the table to AUTO.
B. Add the PAGLOCK hint to the UPDATE statement in the procedure.
C. Disable the LOCK_ESCALATION option of the table.
D. Add the TABLOCK hint to the UPDATE statement in the procedure.

Answer: D

Question: 102

You need to design a solution to guarantee that a stored procedure is part of every transaction. What should you do?

A. Enable implicit transactions.
B. Enable Distributed Transaction Coordinator (DTC).
C. Set the NOCOUNT option to ON.
D Set the XACT_ABORT option to ON.

Answer: A

Question: 103

You have a line-of-business application. The application generates reports based on data from database views. Users report that it takes a long time to generate reports. You run a SQL Server Profiler trace and discover that the application is generating many blocking processes. You need to minimize the number of blocking processes. You must achieve this goal without modifying the statements that the application sends to the server. What should you do?

A. Change the isolation level of the database.
B. Implement a database Service Broker.
C. Create new database report views.
D. Change the isolation level of each query.

Answer: A

Question: 104

You are a database developer. You plan to design a database solution by using SQL Server 2008. You are writing a query that returns XML data from a table in a database. You need to ensure that your result set is encapsulated within a root element. What should you do?

A. Use the RAW mode along with an ELEMENTS directive.
B. Use the PATH mode along with a ROOT directive.
C. Use the EXPLICIT mode along with a TYPE directive.
D. Use the AUTO mode along with a ROOT directive.

Answer: B

Question: 105

You use SQL Server 2008 to design a database that will hold incoming XML responses for an Electronic Data Interchange system. You have the following requirements:

- The database is scalable.
- The data is accessible to heterogeneous platforms.
- The database stores various types of reports from multiple sources.
- The database stores large amounts of data.
- The solution allows search by keywords.
- Full text search is not enabled in the database.

You need to design the database to meet these requirements. What should you do?

A. Use SQL Server 2008 tables to store the data in a varchar (max) column.
B. Use SQL Server 2008 tables to store the data in a varbinary (max) column with FILESTREAM option.
C. Use SQL Server 2008 tables to store the data in a varbinar y(max) column.
D. Use SQL Server 2008 tables to store the data using XML datatype.

Answer: D

Question: 106

You need to develop a stored procedure strategy that will manipulate temporary result sets to meet the following requirements:

- Stored procedures must receive result sets as parameters
- The strategy must be developed by using the minimum amount of effort

The result sets will contain less than 1,000 rows. What should you use?

A. a common table expression (CTE)
B. a view
C. a user-defined table type
D. a scalar function

Answer: C

Question: 107

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database will contain a view. The view will contain a computed column that will be indexed. The computed column will use a user-defined scalar function. The function will perform complex string manipulations. You need to identify the appropriate function to use. What should you do?

A. Use a nondeterministic Transact-SQL table-valued function.
B. Use a deterministic Transact-SQL table-valued function.
C. Use a nondeterministic common language runtime (CLR) scalar-valued function.
D. Use a deterministic common language runtime (CLR) scalar-valued function.

Answer: D

Question: 108

You are developing a security policy for the SQL Server developers in your organization. You need to create a security strategy to protect Transact-SQL applications from SQL injection attacks. What should you include in the strategy?

A. Require certificates for Service Broker communications.
B. Parse input parameters to prevent the use of the following strings:
- ;
- --
- /*
- */

C. Parse input parameters to prevent the use of the following strings:
- &
- @
- //
- ++

D. Disable Service Broker.

Answer: B

Question: 109

You are a database developer. You plan to design a database solution by using SQL Server 2008. Your company operates a fulfillment warehouse. The company has the following business requirements:
- The packing of items to fulfill orders is processed as quickly as possible.
- When the product picker indicates that a box is full, the exact items list of the content and invoice are made available.

You plan to design a Transact-SQL user-defined function. The function must perform the following tasks:
- Accept a list of value pairs named ProductID and Quantity as input.
- Retrieve the product price information from the ProductPrice table.
- Calculate the total price for each product.
- Calculate the total price for all products.
- Return the detailed and aggregated totals.

You need to design the function to meet these requirements. You want to achieve this goal by using the minimum amount of coding effort. What should you do?

A. Create a multistatement table-valued function that accepts an XML parameter.
B. Create a multistatement table-valued function that accepts a table-valued parameter.
C. Create an inline table-valued function that accepts an XML parameter.
D. Create an inline table-valued function that accepts a table-valued parameter.

Answer: B

Question: 110

You have a table named Sales that lists all of the products sold by your company. The Sales table contains a column named UnitsSold. UnitsSold contains the total number of units sold of each product. Each product appears in only one row. You have the following view:
You discover that the view does not return a list of the top 100 selling products. You need to ensure that the view returns a list of the top 100 selling products. Which SQL statement should you use?

```
CREATE VIEW [dbo].[TopSales]
   AS
   SELECT TOP(100) [product]
         ,[UnitsSold]
     FROM [DB1].[dbo].[sales]
     GO
```

A.
```
ALTER VIEW [dbo].[TopSales]
   AS
   SELECT TOP(100) [UnitsSold]
         ,[product]
     FROM [DB1].[dbo].[sales]
     GO
```

B.
```
ALTER VIEW [dbo].[TopSales]
   AS
   SELECT TOP(100) PERCENT [product]
         ,[UnitsSold]
     FROM [DB1].[dbo].[sales]
   ORDER BY [UnitsSold]
      GO
```

C.
```
ALTER VIEW [dbo].[TopSales]
   AS
   SELECT TOP(100) [product]
         ,[UnitsSold]
     FROM [DB1].[dbo].[sales]
   ORDER BY [UnitsSold] DESC
      GO
```

D.
```
ALTER VIEW [dbo].[TopSales]
   AS
   SELECT TOP(100) [product]
         ,[UnitsSold]
     FROM [DB1].[dbo].[sales]
   ORDER BY [product] DESC
      GO
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: C

Question: 111

You have a table that contains a string column. Most of the rows have the same value. You need to create a multistep stored procedure that meets the following requirements:

- Accepts a text input parameter
- Provides optimal performance for all input values
- Has only one step using the input parameter as a predicate

What should you use?

A. sp_recompile
B. WITH RECOMPILE
C. sp_configure
D. a RECOMPILE query hint

Answer: D

Question: 112

You are designing a CLR stored procedure that will access a remote Web service. You need to ensure that the CLR stored procedure can access the remote Web service. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Grant EXECUTE on the CLR stored procedure.
B. Implement a custom trust level policy.
C. Configure the CLR stored procedure to use the SAFE permission set.
D. Configure the CLR stored procedure to use the EXTERNAL_ACCESS permission set.

Answer: BD

Question: 113

You are a database developer. You plan to design a database solution by using SQL Server 2008. A database contains a table named Customer. The structure of the Customer table is as shown in the following table.

Column Name	Data Type	Description
customer_id	int	Clustered primary key
customer_name	nvarchar(80)	Full name
address	nvarchar(1,000)	Address details
country_id	int	ID of home country

The solution uses the following stored procedure to return customer details.

```
CREATE PROC GetCustomersByCountry
  @CountryID int
AS
SELECT customer_id, customer_name
FROM Customer
WHERE country_id = @CountryID;
```

Users report that the stored procedure takes a long time to execute. You need to optimize the performance of the stored procedure. What should you do?

A. Recreate the primary key as a nonclustered unique index and build a clustered index on the country_id column.
B. Build a nonclustered index on the country_id column and use the INCLUDE clause to include the customer_name column.
C. Build a nonclustered index on the country_id, customer_name, and customer_id columns.
D. Build a nonclustered index only on the country_id column.

Answer: B

Question: 114

You have an office in Tokyo and an office in New York. Each office contains a server that runs SQL Server 2008 Enterprise. The New York office contains a central database that is mirrored to the Tokyo office for high-availability. You need to recommend a solution that enables users in the Tokyo office to generate reports locally. The solution must minimize WAN utilization. What should you recommend?

A. Implement a failover cluster.
B. Create distributed partitioned views.
C. Create database snapshots.
D. Implement snapshot replication.

Answer: C

Question: 115

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database contains a table that is stored as a heap. You perform page-level compression on the table. When data is added to the table by using BULK INSERT, the new pages are not compressed. You need to ensure page-level compression for all data pages when they are allocated to the table. Which query hint should you use?

A. PAG LOCK
B. NOLOCK
C. NOWAIT
D. TABLOCK

Answer: C

Question: 116

You are a database developer. You plan to design a database solution by using SQL Server 2008. Your company has a main office in New York and several branch offices globally. All the offices use databases on their local SQL Server 2008 servers to support trading applications. A low-bandwidth WAN link connects the offices. The WAN link is subject to interruptions. You plan to implement a reporting instance that will be deployed in the main office. You need to design a solution to transfer data from all offices to the reporting instance in the main office. You also need to ensure that the solution has minimum effect on the performance of all trading servers. What should you do?

A. Create a warm standby server in the main office by using log shipping from the branch offices.
B. use distributed transactions in the branch offices to write the trade information to the local trading systems and the main office trading system.
C. Create a mirrored database solution in high-safety mode in each branch office. Place the mirrored databases in the main office.
D. Create a publication by using transactional replication in each branch office. Create subscriptions in the main office.

Answer: D

Question: 117

Your company is developing an application. The database platform for the application will be vendor-independent. You need to ensure that the application automatically stores the current date and time data when a record is inserted or updated, regardless of the database platform. What should you do?

A. Use Entity Framework and DateTime.Now.
B. Create a database column that has a default value of GETDATEQ.
C. Create an INSERT trigger that uses the GETDATEQ function.
D. Use the datetime2 data type.

Answer: A

Question: 118

A database contains two tables named Table1 and Table1_Details. Table1_Details contains details about the items in Table1. You need to ensure that when an item is removed from Table1, all related items are removed from Table1_Details. You must achieve this goal by using the minimum amount of Transact-SQL code. What should you do?

A. Create a foreign key relationship. Set Cascade Delete to Set Null.
B. Create a foreign key relationship. Set Cascade Delete to Cascade.
C. Create a trigger on Table1_Details that fires on the Delete action.
D. Create a stored procedure that deletes all related items from Table1_Detai!s.

Answer: B

Question: 119

You need to design a database solution that meets the following requirements:
- Supports different types of databases
- Provides reliable messaging between databases
- Provides data workload distribution across several databases

Which SQL Server component should you use?

A. SQL Server Agent
B. SQL Mail
C. Notification Services
D. Service Broker

Answer: D

Question: 120

You have a table that contains 10 million rows. You need to design a query that returns a 100,000-row sample dataset. The solution must minimize the query's execution time. The sample may contain inconsistent data. Which isolation level should you set to ON?

A. READ COMMITTED SNAPSHOT
B. READ COMMITTED
C. REPEATABLE READ
D. READ UNCOMMITTED

Answer: D

Question: 121

You are a database developer. You design a database solution by using SQL Server 2008. Your company has offices in Europe, Asia, North America, and Africa. The company data is updated for each region after business hours. The queries used by reports on the database are blocked when the data is being updated. Occasionally, the data is updated simultaneously for the Africa and Europe regions. You need to ensure maximum concurrency for the database by using minimum possible system resources. Which isolation level should you use?

A. READ COMMITTED
B. REPEATABLE READ
C. SNAPSHOT
D. SERIALIZABLE

Answer: A

Question: 122

You are a database developer. You plan to design a database solution by using SQL Server 2008. A database contains a stored procedure that is created by using the following DDL code segment.

```
CREATE PROC SP1
AS
  BEGIN TRY
    BEGIN TRANSACTION
    INSERT INTO Products …
    UPDATE Sales …
    COMMIT TRANSACTION
  END TRY
  BEGIN CATCH
    ROLLBACK TRANSACTION
  END CATCH;
RETURN
```

You discover that the UPDATE statement occasionally throws an exception that causes the entire transaction to roll back. You need to ensure that when the UPDATE statement causes an exception, SP1 performs the following tasks:

- The INSERT statement is committed,
- All data is in a consistent state.
- The Transaction count is equal to 0 after execution completes.

What should you do?

A. • Add a TRY/CATCH block after the INSERT statement.
• Place the UPDATE statement inside the new TRY block.
• Add a ROLLBACK TRANSACTION statement inside the new CATCH block.
B. • Add a TRY/CATCH block after the INSERT statement.
• Place the UPDATE statement inside the new TRY block.
• Add error-handling code inside the new CATCH block.
C. Add an XACT_ABORT ON statement to the first line of the procedure.
D. • Add a SAVE TRANSACTION TR1 statement after the INSERT statement.
• Add a TRY/CATCH block after the SAVE TRANSACTION TR1 statement.
• Place the UPDATE statement inside the new TRY block.
• Add a ROLLBACK TRANSACTION TR1 statement inside the new CATCH block.

Answer: D

Question: 123

You need to recommend a solution that will enable two or more application sessions to share the same transaction and locks. The solution must enable the applications to work on the same data without creating lock conflicts. What should you recommend?

A. a stoplist
B. bound sessions
C. nested transactions
D. savepoints

Answer: B

Question: 124

A new data analytics application is being implemented in your organization. Users will run a process that compares result sets before and after executing complex data modifications. The data will always be queried by using the same conditions. Some tables updated by the processes will not need to be compared.
Your need to design a locking strategy for the process that meets the following requirements:

- Enables other processes or users to modify tables that are not being compared
- Prevents other processes from performing data manipulation language (DML) activity on the tables that are being compared

What should the strategy include?

A. Set the transaction isolation level to SERIALIZABLE.
B. Use a transaction that uses the WITH (NOLOCK) hint.
C. Use a transaction that uses the WITH (HOLDLOCK) hint.
D. Set the transaction isolation level to READ UNCOMMITTED.

Answer: B

Question: 125

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database will contain a view. The view will contain a computed column that will be indexed. The computed column will use a user-defined scalar function. The function will perform complex mathematical manipulations using random generated float numeric values. You need to identify the appropriate function to use to generate random values. Which function should you use?

A. a deterministic Transact-SQL table-valued function
B. a nondeterministic common language runtime (CLR) scalar-valued function
C. a deterministic common language runtime (CLR) scalar-valued function
D. a nondeterministic Transact-SQL table-valued function to generate random values

Answer: C

Question: 126

You are designing a table to store customer data. The table will contain a column to store the e-mail addresses of the customers. You need to recommend a solution to store the e-mail addresses. The solution must meet the following requirements:

- E-mail addresses must contain the @ symbol
- E-mail addresses must be validated by using a regular expression
- E-mail addresses must contain a top-level domain of .com, .org, or .edu

What should you recommend?

A. Create an e-mail profile for the Database Mail SQL Server component.
B. Use a CHECK constraint that uses a CLR function.
C Add a custom schema to the database.
D. Use a non-persisted computed column.

Answer: B

Question: 127

You have a table named Sales that contains the data listed in the following table.

SalesPerson	TotalSales
SalesRep01	100.00
SalesRep02	100.00
SalesRep03	200.00
SalesRep04	200.00
SalesRep05	300.00
SalesRep06	300.00
SalesRep07	400.00
SalesRep08	400.00
SalesRep09	500.00
SalesRep10	500.00

You need design a query that retrieves a list that contains all sales people that have top three values from the TotalSales column. Which query should you design?

A.
```
select TOP 3
SalesPerson,
TotalSales
from Sales
```

B.
```
select TOP 3
SalesPerson,
TotalSales
from Sales
order by TotalSales desc
```

C.
```
select TOP 3 with ties
SalesPerson,
TotalSales
from Sales
order by TotalSales desc
```

D.
```
select TOP 3 with ties
SalesPerson,
TotalSales
from Sales
order by SalesPerson desc
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: C

Question: 128

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database will contain a table to stage data from an external source. The imported data will contain a field named TransactionTime. The TransactionTime field will use the hh:mm:ss.[nnn] format (such as 12:55:30.123).
You need to select the appropriate data type for the TransactionTime field. You need to achieve this goal by incurring the minimum amount of storage cost. Which data type should you use?

A. time
B. datetime2
C. smalldatetime
D. time (1)

Answer: A

Question: 129

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database contains a table that has two partitions. The first partition contains the current data, and the second partition contains historical data. There is a high frequency of data manipulation on the current data. The testers report that they are frequently unsuccessful in querying the historical data only. You discover that locks are being escalated to the table-level lock. You need to ensure that without modifying the SELECT statements, you enable users to query the historical data. You want to achieve this goal by using the minimum amount of administrative effort and minimally affecting other queries. What should you do?

A. Use the ALTER TABLE ... SET (LOCK_ESCALATION = AUTO) command.
B. Move the historical partition to a read-only filegroup.
C. Set the Server Startup Parameters to include -T1211.
D. Set DEADLOCK PRIORITY to HIGH.

Answer: D

Question: 130

You are designing a new database. The tables of the database will be replicated to multiple offices. You need to design the tables to meet the following requirements:

- A row identifier must be set when a row is created
- The row identifier must be unique across the entire organization

What should you recommend?

A. Add a column to all the tables that have the hierarchyid data type.
B. Add a column to all the tables that have a time data type. Configure the DEFAULT constraint to use the GETDATE () function.
C. Add a column to all the tables that have the identity property.
D. Add a column to all the tables that have a uniqueidentifier data type. Configure the DEFAULT constraint to use the NEWIDQ function.

Answer: D

Question: 131

You need to design a table that will contain a monetary value. The value must support five digits to the right of the decimal point. Which data type should you choose?

A. decimal
B. bigint
C. int
D. money

Answer: A

Question: 132

You are a database developer. You plan to create a database by using SQL Server 2008. The database has a table

named Employees. The table contains records of employees and their managers. The table includes the EmployeeID and ManagerID fields. The EmployeeID values are unique. The value in the ManagerID field is the employee ID of the employee's manager. A Web site requires XML formatted output of all managers and employees to be displayed as a tree diagram. You need to produce the required output by querying the database without using system stored procedures. What should you do?

A. Create a table-valued function by using the hierarchyid data type.
B. Create a scalar-valued function by using the FOR XML PATH clause and the TYPE directive.
C. Create a scalar-valued function by using the OPENXML () function.
D. Create a table-valued function by using a common table expression (CTE).

Answer: B

Question: 133

You have a table that contains an XML column named XMLDatal. The column contains the following nodes:

- Title
- Description
- Author
- Weight
- NumPages

You need to design a stored procedure that will return only the title and description in a tabular result set. The solution must be developed by using minimum amount of effort. How should you extract the information?

A. Execute sp_preparedocument.
B. Use FOR XML PATH in a select statement.
C. Use XMLDatal.Exists () in a select statement.
D. Use XMLDatal.Query () in a select statement.

Answer: D

Question: 134

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database contains a large table that has 20 million rows. The table contains the following columns:

- CustomerNumber
- CompanyName
- ContactFirstName
- ContactLastName

The table currently has single-column nonclustered indexes on the CustomerNumber, CompanyName, and ContactFirstName columns.
An application uses data from this table. The user interface of the application allows the usage of any one filter from the following list of filters:

- CustomerNumber and CompanyName
- CompanyName
- ContactLastName
- ContactLastName and ContactFirstName

In all cases, the listed order of the columns is the order in which they will appear in the WHERE clause that is generated. You need to design an indexing strategy for this table, so that the query optimizer can quickly perform an index seek when searching through the table data. What should you recommend?

A. • Drop all existing indexes.
• Create two multicolumn indexes, one on CustomerNumber and CompanyName and the other on ContactLastName and ContactFirstName.
B. • Drop all existing indexes.
• Create two multicolumn indexes, one on CompanyName and CustomerNumber and the other on ContactLastName and ContactFirstName.
C. • Drop the indexes on CustomerNumber and ContactFirstName.
• Create two multicolumn indexes, one on CustomerNumber and CompanyName and the other on ContactLastName and ContactFirstName.
D. • Drop all existing indexes.
• Create a new index on ContactLastName and ContactFirstName.
• Create a multicolumn index on CustomerNumber and CompanyName.

Answer: C

Question: 135

You have a server that runs SQL Server 2008 Standard. The server provides data storage for a third-party contact management application. A service-level agreement for the application does not allow for modifications to be made to the application or to the database objects used by the application. You need to recommend a strategy to mitigate performance issues. The strategy must minimize database growth. What should you recommend?

A. a scalable shared database
B. clustered indexes
C. plan guides
D. partitioned tables

Answer: C

Question: 136

Your company has four offices. Each office contains a server that runs SQL Server 2008. All corporate data is stored in a central location. You need to create a reporting solution. The solution must meet the following requirements:

- Minimize hardware costs
- Minimize administrative effort
- Minimize the time it takes to generate the reports
- Enable users to run reports locally, even if a WAN link fails

What should you do?

A. Implement database mirroring.
B. Implement log shipping.
C. Create horizontally partitioned tables and a federated database.
D. Implement a geographically dispersed SQL Server 2008 cluster.

Answer: B

Question: 137

You have a server that runs SQL Server 2008 Enterprise. The server contains a 300-GB database. At the end of every month, several reports are generated from the database. Users report that it takes a long time to access data from the database while the reports are being generated. You need to recommend a solution to improve the data access time while the reports are being generated from the database. The solution must use a minimum amount of administrative effort. What should you recommend?

A. linked servers
B. database snapshots
C. a failover cluster
D. database mirroring

Answer: B

Question: 138

You are a database developer. You plan to design a database solution by using SQL Server 2008. The database will contain a table named Claims. The Claims table will contain a large amount of data. You plan to partition the data into following categories:

- Open claims
- Claims closed before January 1, 2005
- Claims closed between January 1, 2005 and December 31, 2007
- Claims closed from January 1, 2008 till date

The close_date field in the Claims table is a date data type and is populated only if the claim has been closed.
You need to design a partition function to segregate records into the defined categories.
What should you do?

A Create a RANGE RIGHT partition function by using the values 20051231, 20071231, and NULL.
B. Create a RANGE LEFT partition function by using the values 20051231, 20071231, and 20080101.
C. Create a RANGE LEFT partition function by using the values 20051231, 20071231, and NULL.
D Create a RANGE RIGHT partition function by using the values 20051231, 20071231, and 20080101.

Answer: A

Question: 139

You are designing a database that will be used for reporting purposes. The database stores data using spatial data type. You need to minimize the data storage requirements and improve the application response time. What should you recommend?

A. Use XML datatype.
B. Use table partitioning.
C. Use row compression.
D. Use sparse columns.

Answer: C