PrepKing

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Prepking - 70-433
Added 2 new questions and explanations for some answers. Removed duplicate questions.

Sections

1. Section 1
2. Section 2
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8. New questions

Exam A

QUESTION 1
You have a user named John. He has SELECT access to the Sales schema. You need to eliminate John's SELECT access rights from the Sales.SalesOrder table without affecting his other permissions.
Which Transact-SQL statement should you use?

A. DROP USER John;
B. DENY SELECT ON Sales.SalesOrder TO John;
C. GRANT DELETE ON Sales.SalesOrder TO John;
D. REVOKE SELECT ON Sales.SalesOrder FROM John;

Correct Answer: B
Section: Section 1
Explanation

Explanation/Reference:
REVOKE – permanently removes both granted an denied permissions on an object, resulting in no permissions.Main thing you have to remember is, this does not restrict user accessing the object completely. If user is in a role that has permission on the object for the operation, user will be able to perform the operation.
DENY – Denies permission to the object for an operation. Once it set, it takes precedence over all other GRANT permissions, user will not be able to perform the operation against the object.

To sum up, because John does not have GRANT permissions on the Sales.SalesOrder table (instead it has GRANT permission on Sales schema), then REVOKE SELECT ON Sales.SalesOrder from John will not remove any permissions.

Here is a code that shows it clearly.

```
-- create a login and user
CREATE LOGIN [John] WITH PASSWORD = '1', CHECK_POLICY = OFF
GO

USE [AdventureWorks2008]
GO
CREATE USER [John] FOR LOGIN [John]
WITH DEFAULT_SCHEMA = [dbo]
GO

-- grant permission on Sales schema
GRANT SELECT ON SCHEMA :: Sales TO [John]

-- Run SELECT with John's credentials and see
-- He sees records
EXECUTE AS USER = 'John'
SELECT * FROM Sales.SalesOrderHeader
REVERT

-- Revoke permisson for the table from him
REVOKE SELECT ON Sales.SalesOrderHeader FROM [John]

-- He still sees data
EXECUTE AS USER = 'John'
SELECT * FROM Sales.SalesOrderHeader
REVERT

-- This explicitly denies permission on SalesOrderHeader to John
-- Once this is executed, he will not be able to see data
-- even we grant him again.
DENY SELECT ON Sales.SalesOrderHeader TO [John]

-- He sees error message: The SELECT permission was denied on the object
'SalesOrderHeader', database 'AdventureWorks2008', schema 'Sales'.
EXECUTE AS USER = 'John'
```

```
SELECT * FROM Sales.SalesOrderHeader
REVERT
```

QUESTION 2
You need to create a column that allows you to create a unique constraint.
Which two column definitions should you choose? (Each correct answer presents a complete solution. Choose two.)

A. nvarchar(26) NULL
B. nvarchar(max) NOT NULL
C. nvarchar(26) NOT NULL
D. nvarchar(26) SPARSE NULL

Correct Answer: AC
Section: Section 1
Explanation

Explanation/Reference:

QUESTION 3
You manage a SQL Server 2008 database that is located at your company's corporate headquarters. The database contains a table named dbo.Sales. You need to create different views of the dbo.Sales table that will be used by each region to insert, update, and delete rows. Each regional office must only be able to insert, update, and delete rows for their respective region.
Which view should you create for Region1?

A. CREATE VIEW dbo.Region1Sales
   AS
   SELECT SalesID,OrderQty,SalespersonID,RegionID FROM dbo.Sales
   WHERE RegionID = 1;
B. CREATE VIEW dbo.Region1Sales
   AS
   SELECT SalesID,OrderQty,SalespersonID,RegionID FROM dbo.Sales
   WHERE RegionID = 1 WITH CHECK OPTION;
C. CREATE VIEW dbo.Region1Sales
   WITH SCHEMABINDING
   AS SELECT SalesID,OrderQty,SalespersonID,RegionID FROM dbo.Sales WHERE RegionID = 1;
D. CREATE VIEW dbo.Region1Sales
   WITH VIEW_METADATA
   AS
   SELECT SalesID,OrderQty,SalespersonID,RegionID FROM dbo.Sales
   WHERE RegionID = 1;

Correct Answer: B
Section: Section 1
Explanation

Explanation/Reference:
CHECK OPTION
Forces all data modification statements executed against the view to follow the criteria set within select_statement. When a row is modified through a view, the WITH CHECK OPTION makes sure the data remains visible through the view after the modification is committed.

QUESTION 4
You administer a SQL Server 2008 database that contains a table name dbo.Sales, which contains the following table definition:

```
CREATE TABLE [dbo].[Sales](
[SalesID] [int] IDENTITY(1,1) NOT NULL PRIMARY KEY CLUSTERED,
[OrderDate] [datetime] NOT NULL,
```

```
[CustomerID] [int] NOT NULL,
[SalesPersonID] [int] NULL,
[CommentDate] [date] NULL);
```

This table contains millions of orders. You run the following query to determine when sales persons comment in the dbo.Sales table:

```
SELECT SalesID,CustomerID,SalesPersonID,CommentDate FROM dbo.Sales
WHERE CommentDate IS NOT NULL AND SalesPersonID IS NOT NULL;
```

You discover that this query runs slow. After examining the data, you find only 1% of rows have comment dates and the SalesPersonID is null on 10% of the rows. You need to create an index to optimize the query. The index must conserve disk space while optimizing your query. Which index should you create?

A. CREATE NONCLUSTERED INDEX idx1
   ON dbo.Sales (CustomerID)
   INCLUDE (CommentDate,SalesPersonID);
B. CREATE NONCLUSTERED INDEX idx1
   ON dbo.Sales (SalesPersonID)
   INCLUDE (CommentDate,CustomerID);
C. CREATE NONCLUSTERED INDEX idx1
   ON dbo.Sales (CustomerID)
   INCLUDE(CommentDate)
   WHERE SalesPersonID IS NOT NULL;
D. CREATE NONCLUSTERED INDEX idx1
   ON dbo.Sales (CommentDate, SalesPersonID)
   INCLUDE(CustomerID)
   WHERE CommentDate IS NOT NULL;

Correct Answer: D
Section: Section 1
Explanation

Explanation/Reference:

QUESTION 5
Your database is 5GB and contains a table named SalesHistory. Sales information is frequently inserted and updated.
You discover that excessive page splitting is occurring.
You need to reduce the occurrence of page splitting in the SalesHistory table.
Which code segment should you use?.

A. ALTER DATABASE Sales MODIFY FILE
   (NAME = Salesdat3, SIZE = 10GB);
B. ALTER INDEX ALL ON Sales.SalesHistory REBUILD WITH (FILLFACTOR = 60);
C. EXEC sys.sp_configure 'fill factor (%)', '60';
D. UPDATE STATISTICS Sales.SalesHistory(Products)
   WITH FULLSCAN, NORECOMPUTE;

Correct Answer: B
Section: Section 1
Explanation

Explanation/Reference:
Fill Factor
The fill-factor option is provided for fine-tuning index data storage and performance. When an index is created or rebuilt, the fill-factor value determines the percentage of space on each leaf-level page to be filled with data, reserving the remainder on each page as free space for future growth. For example, specifying a fill-factor value of 60 means that 40 percent of each leaf-level page will be left empty, providing space for index expansion as data is added to the underlying table.

Page Splits
A correctly chosen fill-factor value can reduce potential page splits by providing enough space for index expansion as data is added to the underlying table.When a new row is added to a full index page, the Database Engine moves approximately half the rows to a new page to make room for the new row. This reorganization is known as a page split. A page split makes room for new records, but can take time to perform and is a resource intensive operation. Also, it can cause fragmentation that causes increased I/O operations.

Fragmentation
Fragmentation breaks down to physical and logical fragmentation (or, internal and external fragmentation). Physical/Internal fragmentation is caused when there is wasted space in the index caused by page splits, deletes, FILLFACTOR and PAD_INDEX. Logical/External fragmentation is when the pages that make up the leaf levels of the index are not in good order. This is usually caused by page splits. Both cause performance problems. Internal fragmentation causes problems because the indexes get bigger and bigger requiring more and more pages to store the data, which means that reads from the index slow things down. External fragmentation causes problems because when the data needs to be read from the index it has to skip all over the place following the links between pages, again, slowing things down.

The SQL Server Database Engine automatically maintains indexes whenever insert, update, or delete operations are made to the underlying data. Over time these modifications can cause the information in the index to become scattered in the database (fragmented). Fragmentation exists when indexes have pages in which the logical ordering, based on the key value, does not match the physical ordering inside the data file.

You can remedy index fragmentation by either reorganizing an index or by rebuilding an index.
To reorganize one or more indexes, use the ALTER INDEX statement with the REORGANIZE clause. Reorganizing an index defragments the leaf level of clustered and nonclustered indexes on tables and views by physically reordering the leaf-level pages to match the logical order (left to right) of the leaf nodes. Having the pages in order improves index-scanning performance. The index is reorganized within the existing pages allocated to it; no new pages are allocated.

Rebuilding an index drops the index and creates a new one. In doing this, fragmentation is removed, disk space is reclaimed by compacting the pages using the specified or existing fill factor setting, and the index rows are reordered in contiguous pages (allocating new pages as needed). This can improve disk performance by reducing the number of page reads required to obtain the requested data.

You can use the CREATE INDEX with the DROP_EXISTING clause or ALTER INDEX with the REBUILD clause statements to set the fill-factor value for individual indexes.

EXEC sys.sp_configure 'fill factor (%)', '60'; will modify the server default fill factor value.

QUESTION 6
You have a table named dbo.Customers. The table was created by using the following Transact-SQL statement:

```
CREATE TABLE dbo.Customers
(
CustomerID int IDENTITY(1,1) PRIMARY KEY CLUSTERED,
AccountNumber nvarchar(25) NOT NULL,
FirstName nvarchar(50) NOT NULL,
LastName nvarchar(50) NOT NULL,
AddressLine1 nvarchar(255) NOT NULL,
AddressLine2 nvarchar(255) NOT NULL,
City nvarchar(50) NOT NULL,
StateProvince nvarchar(50) NOT NULL,
Country nvarchar(50) NOT NULL,
PostalCode nvarchar(50) NOT NULL,
CreateDate datetime NOT NULL DEFAULT(GETDATE()),
ModifiedDate datetime NOT NULL DEFAULT(GETDATE())
)
```

You create a stored procedure that includes the AccountNumber, Country, and StateProvince columns from the dbo.Customers table. The stored procedure accepts a parameter to filter the output on the AccountNumber column. You need to optimize the performance of the stored procedure. You must not change the existing structure of the table. Which Transact-SQL statement should you use?

A. CREATE STATISTICS ST_Customer_AccountNumber ON dbo.Customer (AccountNumber) WITH FULLSCAN;
B. CREATE CLUSTERED INDEX IX_Customer_AccountNumber ON dbo.Customer (AccountNumber);
C. CREATE NONCLUSTERED INDEX IX_Customer_AccountNumber ON dbo.Customer (AccountNumber) WHERE AccountNumber = '';
D. CREATE NONCLUSTERED INDEX IX_Customer_AccountNumber ON dbo.Customer (AccountNumber) INCLUDE (Country, StateProvince);

Correct Answer: D
Section: Section 1
Explanation

Explanation/Reference:

QUESTION 7
You have a table named Customer.
You need to ensure that customer data in the table meets the following requirements:
credit limit must be zero unless customer identification has been verified.
credit limit must be less than 10,000.
Which constraint should you use?

A. CHECK (CreditLimt BETWEEN 1 AND 10000)
B. CHECK (Verified = 1 AND CreditLimt BETWEEN 1 AND 10000)
C. CHECK ((CreditLimt = 0 AND Verified = 0) OR (CreditLimt BETWEEN 1 AND 10000 AND Verified = 1))
D. CHECK ((CreditLimt = 0 AND Verified = 0) AND (CreditLimt BETWEEN 1 AND 10000 AND Verified = 1))

Correct Answer: C
Section: Section 1
Explanation

Explanation/Reference:

QUESTION 8
You have a table named AccountsReceivable. The table has no indexes. There are 75,000 rows in the table. You have a partition function named FG_AccountData. The AccountsReceivable table is defined in the following Transact-SQL statement:

```
CREATE TABLE AccountsReceivable (
column_a INT NOT NULL,
column_b VARCHAR(20) NULL)
ON [PRIMARY];
```

You need to move the AccountsReceivable table from the PRIMARY file group to FG_AccountData. Which Transact-SQL statement should you use?

A. CREATE CLUSTERED INDEX idx_AccountsReceivable ON AccountsReceivable(column_a) ON [FG_AccountData];
B. CREATE NONCLUSTERED INDEX idx_AccountsReceivable ON AccountsReceivable(column_a) ON [FG_AccountData];
C. CREATE CLUSTERED INDEX idx_AccountsReceivable ON AccountsReceivable(column_a) ON FG_AccountData(column_a);
D. CREATE NONCLUSTERED INDEX idx_AccountsReceivable ON AccountsReceivable(column_a) ON FG_AccountData(column_a);

Correct Answer: C
Section: Section 1
Explanation

Explanation/Reference:

QUESTION 9
You have a SQL Server 2008 database named Contoso with a table named Invoice. The primary key of the table is InvoiceId, and it is populated by using the identity property. The Invoice table is related to the InvoiceLineItem table. You remove all constraints from the Invoice table during a data load to increase load speed. You notice that while the constraints were removed, a row with InvoiceId = 10 was removed from the database. You need to re-insert the row into the Invoice table with the same InvoiceId value. Which Transact-SQL statement should you use?

A. INSERT INTO Invoice (InvoiceId, ... VALUES (10, ...
B. SET IDENTITY_INSERT Invoice ON;
INSERT INTO Invoice (InvoiceId, ...
VALUES (10, ...
SET IDENTITY_INSERT Invoice OFF;
C. ALTER TABLE Invoice;
ALTER COLUMN InvoiceId int;
INSERT INTO Invoice (InvoiceId, ...
VALUES (10, ...
D. ALTER DATABASE Contoso SET SINGLE_USER;
INSERT INTO Invoice (InvoiceId, ...
VALUES (10, ...
ALTER DATABASE Contoso SET MULTI_USER;

Correct Answer: B
Section: Section 1
Explanation

Explanation/Reference:

QUESTION 10
You are developing a new database. The database contains two tables named SalesOrderDetail and Product.
You need to ensure that all products referenced in the SalesOrderDetail table have a corresponding record in the Product table.
Which method should you use?

A. JOIN
B. DDL trigger
C. Foreign key constraint
D. Primary key constraint

Correct Answer: C
Section: Section 1
Explanation

Explanation/Reference:

QUESTION 11
You are creating a table that stores the GPS location of customers.
You need to ensure that the table allows you to identify customers within a specified sales boundary and to calculate the distance between a customer and the nearest store.
Which data type should you use?

A. geometry
B. geography
C. nvarchar(max)

D. varbinary(max) FILESTREAM

Correct Answer: B
Section: Section 1
Explanation

Explanation/Reference:
The GEOGRAPHY data type is used to store ellipsoidal (round-earth) data. It is used to store latitude and longitude coordinates that represent points, lines, and polygons on the earth's surface. For example, GPS data that represents the lay of the land is one example of data that can be stored in the GEOGRAPHY data type.

QUESTION 12
You plan to add a new column named SmallKey to the Sales.Product table that will be used in a unique constraint. You are required to ensure that the following information is applied when adding the new column:

'a1' and 'A1' are treated as different values
'a' and 'A' sort before 'b' and 'B' in an ORDER BY clause You need to select the collation that meets the requirements for the new column. Which collation should you select?

A. Latin1_General_BIN
B. SQL_Latin1_General_CP1_CI_AI
C. SQL_Latin1_General_CP1_CI_AS
D. SQL_Latin1_General_CP1_CS_AS

Correct Answer: D
Section: Section 1
Explanation

Explanation/Reference:
SQL Server Collation Name consists of several parts, one of them is responsible for CaseSensitivity - CI specifies case-insensitive, CS specifies case-sensitive.
BIN specifies the binary sort order to be used.
So, because we want case-sensitive location, B and C are not suitable. Latin1_General_BIN use binary sort order, but we want linguistical sort order (according to rules of language), not based on the code point values of characters.

QUESTION 13
You have multiple tables that represent properties of the same kind of entities. The property values are comprised of text, geometry, varchar(max), and user-defined types specified as 'bit NOT NULL' data types. You plan to consolidate the data from multiple tables into a single table. The table will use semi-structured storage by taking advantage of the SPARSE option.
You are tasked to identify the data types that are compatible with the SPARSE option.
Which data type is compatible with the SPARSE option?

A. text
B. geometry
C. varchar(max)
D. A user-defined type defined as 'bit NOT NULL'

Correct Answer: C
Section: Section 1
Explanation

Explanation/Reference:
Sparse columns are ordinary columns that have an optimized storage for null values. Sparse columns reduce the space requirements for null values at the cost of more overhead to retrieve nonnull values.
The following data types cannot be specified as SPARSE:
- geography
- geometry
- image

- ntext
- text
- timestamp
- user-defined data types

QUESTION 14
You currently store date information in two columns. One column contains the date in local time and one column contains the difference between local time and UTC time. You need to store this data in a single column.
Which data type should you use?

A. time
B. datetime2
C. datetime2(5)
D. datetimeoffset

Correct Answer: D
Section: Section 1
Explanation

Explanation/Reference:
datetimeoffset defines a date that is combined with a time of a day that has time zone awareness.

QUESTION 15
You have two partitioned tables named Transaction and TransactionHistory.
You need to archive one of the partitions of the Transaction table to the TransactionHistory table.
Which method should you use?

A. ALTER TABLE ...
   SWITCH ...
B. INSERT ... SELECT ...; TRUNCATE TABLE
C. ALTER PARTITION FUNCTION ... MERGE ...
D. ALTER PARTITION FUNCTION ...
   SPLIT ...

Correct Answer: B
Section: Section 1
Explanation

Explanation/Reference:

QUESTION 16
You are creating a new table in a database. Your business requires you to store data in the table for only seven days.
You need to implement a partitioned table to meet this business requirement.
Which tasks should you complete?

A. Create the partition function
   Create the partition scheme
   Create the table
B. Create the partition function
   Create the table
   Create a filtered index
C. Add a secondary file to the primary filegroups
   Create the table
   Create the distributed partitioned view
D. Create the partition function
   Create the partition scheme
   Create the distributed partitioned view

Correct Answer: A
Section: Section 1
Explanation

Explanation/Reference:

QUESTION 17
You need to alter stored procedures to use the WITH RECOMPILE option. Which types of stored procedures should you alter? (Each correct answer represents a complete solution. Choose two.)

A. Stored procedures implemented from CLR assemblies.
B. Stored procedures that require the FOR REPLICATION option.
C. Stored procedures that require the WITH ENCRYPTION option.
D. Stored procedures that contain queries that use the OPTION (RECOMPILE) hint.

Correct Answer: CD
Section: Section 1
Explanation

Explanation/Reference:
As a database is changed by such actions as adding indexes or changing data in indexed columns, the original query plans used to access its tables should be optimized again by recompiling them. This optimization happens automatically the first time a stored procedure is run after Microsoft SQL Server is restarted. It also occurs if an underlying table used by the stored procedure changes. But if a new index is added from which the stored procedure might benefit, optimization does not happen until the next time the stored procedure is run after SQL Server is restarted. In this situation, it can be useful to force the stored procedure to recompile the next time it executes.

SQL Server provides three ways to force a stored procedure to recompile:
- The sp_recompile system stored procedure forces a recompile of a stored procedure the next time that it is run. It does this by deleting the existing plan from the procedure cache forcing a new plan to be created the next time that the procedure is run.
- Creating a stored procedure that specifies the WITH RECOMPILE option in its definition indicates that SQL Server does not cache a plan for this stored procedure; the stored procedure is recompiled every time that it is executed. Use of this option is uncommon and causes the stored procedure to execute more slowly, because the stored procedure must be recompiled every time that it is executed.
- You can force the stored procedure to be recompiled by specifying the WITH RECOMPILE option when you execute the stored procedure.

A. CREATE and ALTER PROCEDURE syntax for CLR Stored Procedure does not have RECOMPILE option.
B. The RECOMPILE option is ignored for procedures created with FOR REPLICATION.
C. ENCRYPTION option and RECOMPILE option can go together.

QUESTION 18
You have a SQL Server database. The database contains two schemas named Marketing and Sales.
The Marketing schema is owned by a user named MarketingManager. The Sales schema is owned by a user named SalesManager.
A user named John must be able to access the Sales.Orders table by using a stored procedure named Marketing.GetSalesSummary.
John is not granted a SELECT permission on the Sales.Orders table.
A user named SalesUser does have SELECT permission on the Sales.Orders table.
You need to implement appropriate permissions for John and the stored procedure Marketing.GetSalesSummary.
What should you do?

A. Marketing.GetSalesSummary should be created by using the EXECUTE AS 'SalesUser' clause. John should be granted EXECUTE permission on Marketing.GetSalesSummary.
B. Marketing.GetSalesSummary should be created by using the EXECUTE AS OWNER clause. John should be granted EXECUTE WITH GRANT OPTION on Marketing.GetSalesSummary.
C. Marketing.GetSalesSummary should be created by using the EXECUTE AS CALLER clause.

John should be granted IMPERSONATE permission for the user named SalesUser.

D. Marketing.GetSalesSummary should be created without an EXECUTE AS clause.
John should be granted SELECT permission on the Sales.Orders table.

Correct Answer: A
Section: Section 1
Explanation

Explanation/Reference:

1. When the module is executed, the Database Engine first verifies that the user executing the module has EXECUTE permission on the module. So John should be granted EXECUTE permission on Marketing. GetSalesSummary stored procedure.
2. Additional permissions checks on objects that are accessed by the module are performed against the user account specified in the EXECUTE AS clause. The user executing the module is, in effect, impersonating the specified user. Because John is not granted a SELECT permission on the Sales. Orders table which is referenced by the stored procedure, EXECUTE AS CALLER is not suitable. (CALLER specifies the statements inside the module are executed in the context of the caller of the module. The user executing the module must have appropriate permissions not only on the module itself, but also on any database objects that are referenced by the module.) Because the user named SalesUser DOES have SELECT permission on the Sales.Orders table, he can be specified in EXECUTE AS clause. It means that Marketing.GetSalesSummary stored procedure should be created by using the EXECUTE AS 'SalesUser' clause.

QUESTION 19
You need to create a stored procedure that accepts a table-valued parameter named @Customers.
Which code segment should you use?

A. CREATE PROCEDURE AddCustomers (@Customers varchar(max))

B. CREATE PROCEDURE AddCustomers (@Customers Customer READONLY)

C. CREATE PROCEDURE AddCustomers (@Customers CustomerType OUTPUT)

D. CREATE PROCEDURE ADDCUSTOMERS
(@Customers varchar (max)) AS EXTERNAL NAME Customer.Add.NewCustomer

Correct Answer: B
Section: Section 1
Explanation

Explanation/Reference:
To create and use table-valued parameters, follow these steps:
1. Create a table type and define the table structure.

```
/* Create a table type. */
CREATE TYPE LocationTableType AS TABLE
( LocationName VARCHAR(50)
, CostRate INT );
GO
```

2. Declare a routine that has a parameter of the table type.

```
/* Create a procedure to receive data for the table-valued parameter. */
CREATE PROCEDURE usp_InsertProductionLocation
   @TVP LocationTableType READONLY
   AS
   SET NOCOUNT ON
   INSERT INTO [AdventureWorks2008R2].[Production].[Location]
         ([Name]
         ,[CostRate]
         ,[Availability]
         ,[ModifiedDate])
      SELECT *, 0, GETDATE()
      FROM  @TVP;
      GO
```

3. Declare a variable of the table type, and reference the table type.

```
/* Declare a variable that references the type. */
```

```
DECLARE @LocationTVP
AS LocationTableType;
```

4. Fill the table variable by using an INSERT statement.

```
/* Add data to the table variable. */
INSERT INTO @LocationTVP (LocationName, CostRate)
   SELECT [Name], 0.00
   FROM
   [AdventureWorks2008R2].[Person].[StateProvince];
```

5. After the table variable is created and filled, you can pass the variable to a routine.

```
/* Pass the table variable data to a stored procedure. */
EXEC usp_InsertProductionLocation @LocationTVP;
```

Restrictions
Table-valued parameters must be passed as input **READONLY** parameters to Transact-SQL routines. You cannot perform DML operations such as UPDATE, DELETE, or INSERT on a table-valued parameter in the body of a routine.

QUESTION 20
You have a computed column that is implemented with a user-defined function. The user-defined function returns a formatted account number. The column must be indexed to provide adequate search performance.
You plan to create an index on the computed column. You need to identify the valid combination of ObjectPropertyEX values for the user-defined function.
Which combination should you use?

A. IsDeterministic = True
   IsSystemVerified = True
   UserDataAccess = False
   SystemDataAccess = False
B. IsDeterministic = True
   IsSystemVerified = True
   IsPrecise = True
   IsTableFunction = True
C. IsDeterministic = False
   IsSystemVerified = True
   UserDataAccess = False
   SystemDataAccess = False
D. IsDeterministic = False
   IsSystemVerified = True
   IsPrecise = True
   SystemDataAccess = False

Correct Answer: A
Section: Section 1
Explanation

Explanation/Reference:

QUESTION 21
You need to identify, within a given clause, if the month of February will contain 29 days for a specified year.
Which object should you use?

A. DML trigger
B. Stored procedure
C. Table-valued function
D. Scalar-valued function

Correct Answer: D
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 22
You are creating a function that references a table.
You need to prevent the table from being dropped.
Which option should you use when you create the function?

A. WITH ENCRYPTION
B. WITH EXECUTE AS
C. WITH SCHEMABINDING
D. WITH RETURNS NULL ON NULL INPUT

Correct Answer: C
Section: Section 2
Explanation

Explanation/Reference:

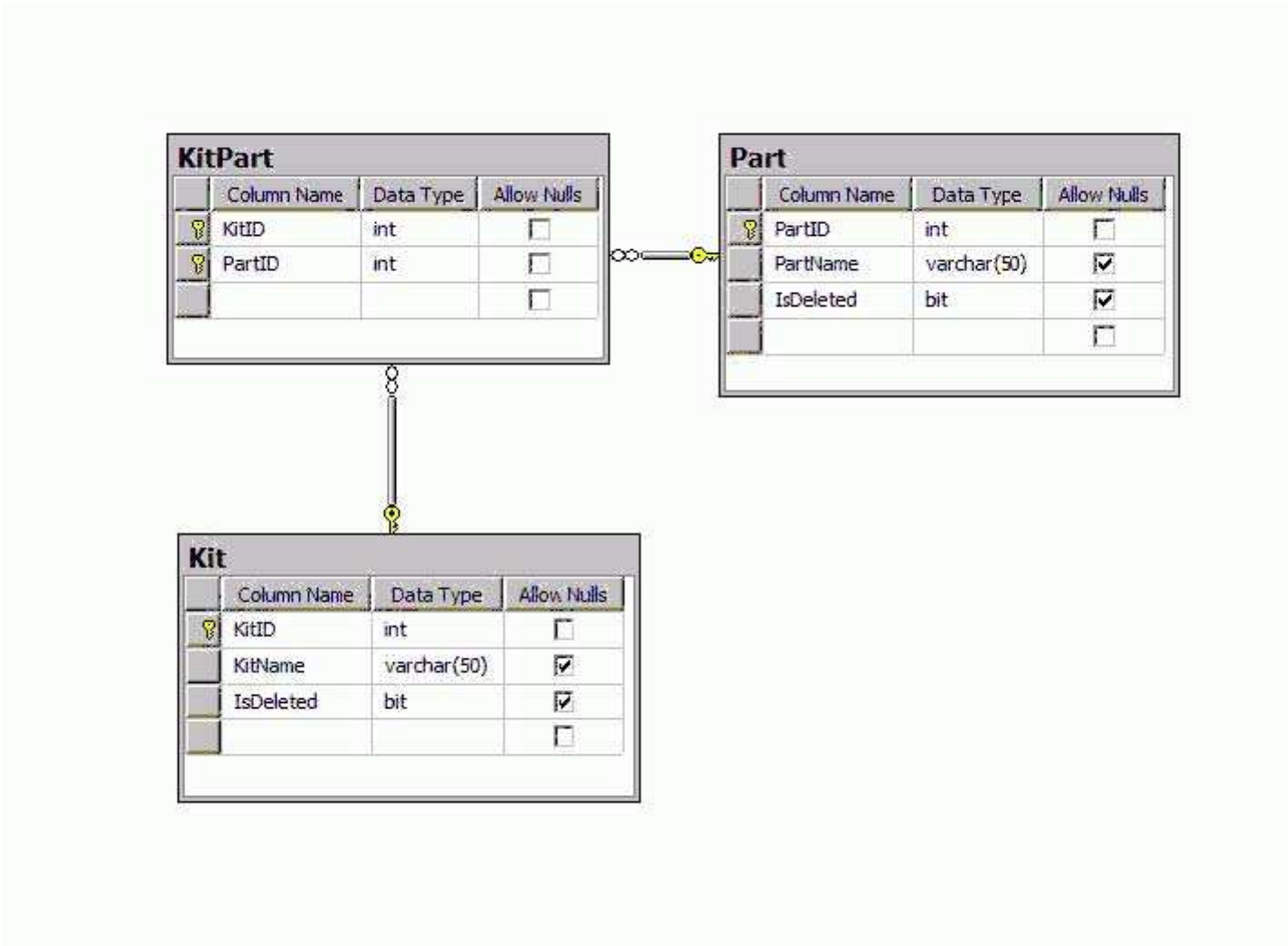
QUESTION 23
You are developing a database using Microsoft SQL Server 2008. The database contains the tables shown in the exhibit. You are required to prevent parts from being deleted if they belong to a kit. If a part belongs to a kit, the delete should not occur and the IsDeleted column for the row should be changed to 'True'. Parts can be deleted if they do not belong to a kit. You have the following Transact-SQL statement to be used in a trigger:

```
UPDATE p
SET IsDeleted = 1
FROM KitPart kp
   JOIN deleted d ON kp.PartID = d.PartID
   JOIN Part p ON kp.PartID = p.PartID;

DELETE FROM p
FROM Part p
  JOIN deleted d ON p.PartID = d.PartID
  LEFT OUTER JOIN KitPart kp ON p.PartID = kp.PartID
WHERE kp.KitID IS NULL;
```

You need to implement the Transact-SQL statement in a trigger. Which trigger syntax should you use?

Exhibit:



A. CREATE TRIGGER tr_Part_d ON Part AFTER DELETE AS BEGIN

END

B. CREATE TRIGGER tr_Part_d ON Part INSTEAD OF DELETE AS BEGIN

END

C. CREATE TRIGGER tr_KitPart_d ON KitPart AFTER DELETE AS BEGIN

END

D. CREATE TRIGGER tr_KitPart_d ON KitPart INSTEAD OF DELETE AS BEGIN

END

Correct Answer: B
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 24
You have a third-party application that inserts data directly into a table.
You add two new columns to the table. These columns cannot accept NULL values and cannot use default constraints.
You need to ensure that the new columns do not break the third-party application.
What should you do?

A. Create a DDL trigger.
B. Create a stored procedure.
C. Create an AFTER INSERT trigger.
D. Create an INSTEAD OF INSERT trigger.

Correct Answer: D
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 25
Your database contains two tables named Order and OrderDetails that store order information. They relate to each other using the OrderID column in each table. Your business requires that the LastModifiedDate column in the Order table must reflect the date and time when a change is made in the OrderDetails table for the related order.
You need to create a trigger to implement this business requirement.
Which Transact-SQL statement should you use?

A. CREATE TRIGGER [uModDate] ON [OrderDetails]
INSTEAD OF UPDATE FOR REPLICATION
AS
UPDATE [Order]
SET [LastModifiedDate] = GETDATE()
FROM inserted
WHERE inserted.[OrderID] = [Order].[OrderID];
B. CREATE TRIGGER [uModDate] ON [Order]
INSTEAD OF UPDATE NOT FOR REPLICATION
AS
UPDATE [Order]
SET [LastModifiedDate] = GETDATE()
FROM inserted
WHERE inserted.[OrderID] = [Order].[OrderID];
C. CREATE TRIGGER [uModDate] ON [Order]
AFTER UPDATE FOR REPLICATION
AS
UPDATE [Order]
SET [LastModifiedDate] = GETDATE()
FROM inserted
WHERE inserted.[OrderID] = [Order].[OrderID];
D. CREATE TRIGGER [uModDate] ON [OrderDetails]
AFTER UPDATE NOT FOR REPLICATION
AS
UPDATE [Order]
SET [LastModifiedDate] = GETDATE()
FROM inserted
WHERE inserted.[OrderID] = [Order].[OrderID];

Correct Answer: D
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 26
You need to ensure that tables are not dropped from your database. What should you do?

A. Create a DDL trigger that contains COMMIT.
B. Create a DML trigger that contains COMMIT.

C. Create a DDL trigger that contains ROLLBACK.
D. Create a DML trigger that contains ROLLBACK.

Correct Answer: C
Section: Section 2
Explanation

Explanation/Reference:
DDL triggers can execute either when a DDL statement is executed or when the user logs on to the SQL Server instance.

DDL triggers can be scoped at either the database or instance level. To scope a DDL trigger at the instance level, you use the *ON ALL SERVER* option. To scope a DDL trigger at the database level, you use the *ON DATABASE* option.

The following is an example of a DDL trigger:

```
CREATE TRIGGER tddl_tabledropalterprevent
ON DATABASE
FOR DROP_TABLE, ALTER_TABLE
AS
PRINT 'You are attempting to drop or alter tables in production!'
ROLLBACK;
```

Almost all DDL commands run within the context of a transaction. Because a DDL trigger also runs within the same transaction context, any DDL statement running in the context of a transaction can be rolled back.

QUESTION 27
You are responsible for a SQL Server database. You require the tables to be added or altered only on the first day of the month. You need to ensure that if the tables are attempted to be modified or created on any other day, an error is received and the attempt is not successful.
Which Transact-SQL statement should you use?

A.
```
CREATE TRIGGER TRG_TABLES_ON_FIRST
ON DATABASE FOR CREATE_TABLE
AS
IF DATEPART(day,getdate())>1
BEGIN
RAISERROR ('Must wait til next month.', 16, 1)
END
```

B.
```
CREATE TRIGGER TRG_TABLES_ON_FIRST ON DATABASE FOR CREATE_TABLE,
ALTER_TABLE AS
IF DATEPART(day,getdate())>1
BEGIN
RAISERROR ('Must wait til next month.', 16, 1)
END
```

C.
```
CREATE TRIGGER TRG_TABLES_ON_FIRST ON DATABASE FOR CREATE_TABLE,
ALTER_TABLE AS
IF DATEPART(day,getdate())>1
BEGIN
ROLLBACK
RAISERROR ('Must wait til next month.', 16, 1)
END
```

D.
```
CREATE TRIGGER TRG_TABLES_ON_FIRST ON ALL SERVER FOR ALTER_DATABASE AS
IF DATEPART(day,getdate())>1
BEGIN
ROLLBACK
RAISERROR ('Must wait til next month.', 16, 1)
END
```

Correct Answer: C
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 28
You have a single CLR assembly in your database. The assembly only references blessed assemblies from the Microsoft .NET Framework and does not access external resources.
You need to deploy this assembly by using the minimum required permissions. You must ensure that your database remains as secure as possible.
Which options should you set?

A. PERMISSION_SET = SAFE
   TRUSTWORTHY ON
B. PERMISSION_SET = SAFE
   TRUSTWORTHY OFF
C. PERMISSION_SET = UNSAFE
   TRUSTWORTHY ON
D. PERMISSION_SET = EXTERNAL_ACCESS
   TRUSTWORTHY OFF

Correct Answer: B
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 29
You have created an assembly that utilizes unmanaged code to access external resources.
You need to deploy the assembly with the appropriate permissions.
Which permission set should you use?

A. SAFE
B. UNSAFE
C. EXTERNAL_ACCESS
D. Default permission set

Correct Answer: B
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 30
You have tables named Products and OrderDetails. The Products table has a foreign key relationship with the OrderDetails table on the ProductID column. You have the following Transact-SQL batch:

```
BEGIN TRY

BEGIN TRANSACTION
DELETE FROM Products WHERE ProductID = 5;
BEGIN TRANSACTION

INSERT INTO OrderDetails
( OrderID, ProductID, Quantity )
VALUES
( 1234, 5, 12 );
COMMIT TRANSACTION

COMMIT TRANSACTION
END TRY
BEGIN CATCH ROLLBACK TRANSACTION PRINT ERROR_MESSAGE();
END CATCH
```

You need to analyze the result of executing this batch. What should be the expected outcome?

A. --The product will be deleted from the Products table.

--The order details will be inserted into the OrderDetails table.

B. --The product will be deleted from the Products table.

--The order details will not be inserted into the OrderDetails table.

C. --The product will not be deleted from the Products table.

--The order details will be inserted into the OrderDetails table.

D. --The product will not be deleted from the Products table.

--The order details will not be inserted into the OrderDetails table.

Correct Answer: D
Section: Section 2
Explanation

Explanation/Reference:
ROLLBACK { TRAN | TRANSACTION }
[transaction_name | @tran_name_variable
| savepoint_name | @savepoint_variable]
[;]

transaction_name
Is the name assigned to the transaction on BEGIN TRANSACTION. When nesting transactions, transaction_name must be the name from the outermost BEGIN TRANSACTION statement.

savepoint_name
Is savepoint_name from a SAVE TRANSACTION statement. Use savepoint_name when a conditional rollback should affect only part of the transaction.

ROLLBACK TRANSACTION without a savepoint_name or transaction_name rolls back to the beginning of the transaction. When nesting transactions, this same statement rolls back all inner transactions to the outermost BEGIN TRANSACTION statement. In both cases, ROLLBACK TRANSACTION decrements the @@TRANCOUNT system function to 0. ROLLBACK TRANSACTION savepoint_name does not decrement @@TRANCOUNT.

A transaction cannot be rolled back after a COMMIT TRANSACTION statement is executed, except when the COMMIT TRANSACTION is associated with a nested transaction that is contained within the transaction being rolled back. In this instance, the nested transaction will also be rolled back, even if you have issued a COMMIT TRANSACTION for it.

SQL Server 2008 error handling best practice

```
CREATE PROCEDURE SaveTranExample
    @InputCandidateID INT
AS
    -- Detect whether the procedure was called from an active transaction and
save that for later use.
    -- In the procedure, @hasOuterTransaction = 0 means there was no active
transaction
    -- and the procedure started one.
    -- @hasOuterTransaction > 0 means an active transaction was started before
the
    -- procedure was called.
    DECLARE @hasOuterTransaction BIT = CASE WHEN @@TRANCOUNT > 0 THEN 1 ELSE 0
END;
    -- Save points need unique names if modules can nest otherwise you can
rollback
    -- to the wrong save point. The solution is to use a GUID to name the save
points.
    DECLARE @rollbackPoint nchar(32) = REPLACE(CONVERT(NCHAR(36), NEWID()),
```

```
N'-', N'');

    IF @hasOuterTransaction > 0
    BEGIN
        -- Procedure called when there is an active transaction.
        -- Create a savepoint to be able to roll back only the work done in the
procedure if there is an error.
        SAVE TRANSACTION @rollbackPoint;
    END
    ELSE
        -- Procedure must start its own transaction.
        BEGIN TRANSACTION @rollbackPoint;
    -- Modify database.
    BEGIN TRY
        -- Do work;
        DELETE HumanResources.JobCandidate
            WHERE JobCandidateID = @InputCandidateID;
        -- Get here if no errors; must commit
        -- any transaction started in the
        -- procedure, but not commit a transaction
        -- started before the transaction was called.
        IF @hasOuterTransaction  = 0
        BEGIN
            -- @hasOuterTransaction = 0 means no transaction was started before
the procedure was called.
            -- The procedure must commit the transaction it started.
            COMMIT TRANSACTION;
        END
    END TRY
    BEGIN CATCH
    -- An error occurred;
    -- If the transaction is still valid
    IF XACT_STATE() = 1
    -- The XACT_STATE function can return the following values:
    -- 1 An open transaction exists that can be either committed or rolled
back.
    -- 0 There is no open transaction.
    -- –1 An open transaction exists, but it is in a doomed state. Due to the
type of error that was raised, the transaction can only be rolled back.
    BEGIN
      -- Because the syntax for ROLLBACK TRANSACTION is the same for the
transaction and for a savepoint
      -- (ROLLBACK TRANSACTION [ transaction_name | @tran_name_variable |
savepoint_name | @savepoint_variable ])
      -- we can write the following:
      ROLLBACK TRANSACTION @rollbackPoint;
      -- In case @rollbackPoint has the name of a transaction, roll back to the
beginning of the transaction.
      -- In case @rollbackPoint has the name of a savepoint, roll back to the
savepoint.
    END;
    ELSE IF XACT_STATE() = -1
    BEGIN
        IF @hasOuterTransaction  = 0
        BEGIN
            -- Transaction started in procedure.
            -- Roll back complete transaction.
            ROLLBACK TRANSACTION;
        END
        -- If the transaction is uncommitable, a rollback to the savepoint is
not allowed
        -- because the savepoint rollback writes to the log. Just return to the
caller, which
        -- should roll back the outer transaction.
    END

    -- Execute Standard module error handler;
    -- After the appropriate rollback, echo error information to the caller.
```

```
    DECLARE @ErrorMessage NVARCHAR(4000);
    DECLARE @ErrorSeverity INT;
    DECLARE @ErrorState INT;

    SELECT @ErrorMessage = ERROR_MESSAGE();
    SELECT @ErrorSeverity = ERROR_SEVERITY();
    SELECT @ErrorState = ERROR_STATE();

    RAISERROR (@ErrorMessage, -- Message text.
               @ErrorSeverity, -- Severity.
               @ErrorState -- State.
               );

    END CATCH
GO
```

QUESTION 31
You are using TRY...CATCH error handling.
You need to raise an error that will pass control to the CATCH block.
Which severity level should you use?

A. 0
B. 9
C. 10
D. 16

Correct Answer: D
Section: Section 2
Explanation

Explanation/Reference:
A TRY…CATCH construct catches all execution errors that have a severity higher than 10 that do not close the database connection.

Severity levels from 20 through 25 are considered fatal. If a fatal severity level is encountered, the client connection is terminated after receiving the message, and the error is logged in the error and application logs.

Severity levels less than 0 are interpreted as 0. Severity levels greater than 25 are interpreted as 25.

QUESTION 32
You have a table named Orders. You have been tasked to modify your company's main database to remove all inactive order rows. You are developing a stored procedure that will enable you to delete these rows. You have written the following code segment to accomplish this task. (Line numbers are included for reference only.)

```
01     BEGIN TRY
02     DECLARE @RowCount INT = 1000
03     WHILE @RowCount = 1000
04     BEGIN
05     DELETE TOP (1000) FROM Orders WHERE Status = 'Inactive';
06     SET @RowCount = @@ROWCOUNT
07     ...
08     END
09     END TRY
10     BEGIN CATCH
11     PRINT ERROR_MESSAGE()
12     END CATCH
```

You need to insert a Transact-SQL statement that will notify you immediately after each batch of rows is deleted. Which Transact-SQL statement should you insert at line 07?

A. RAISERROR ('Deleted %i rows', 6, 1, @RowCount)
B. RAISERROR ('Deleted %i rows', 16, 1, @RowCount)
C. RAISERROR ('Deleted %i rows', 10, 1, @RowCount) WITH NOWAIT

D. RAISERROR ('Deleted %i rows', 11, 1, @RowCount) WITH NOWAIT

Correct Answer: C
Section: Section 2
Explanation

Explanation/Reference:
RAISERROR can be used as an alternative to PRINT to return messages to calling applications.

Because RAISERROR run with a severity of 11 to 19 in a TRY block transfers control to the associated CATCH block, specify a severity of 10 or lower to use RAISERROR to return a message from a TRY block without invoking the CATCH block.

NOWAIT option sends messages immediately to the client.

QUESTION 33
You have a transaction that uses the repeatable read isolation level.
This transaction causes frequent blocking problems. You need to reduce blocking. You also need to avoid dirty reads and non-repeatable reads.
Which transaction isolation level should you use?

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

Correct Answer: A
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 34
You are writing a batch that contains multiple UPDATE statements to modify existing products. You have placed these updates into one explicit transaction. You need to set an option at the beginning of the transaction to roll back all changes if any of the updates in the transaction fail. Which option should you enable?

A. ARITHABORT
B. XACT_ABORT
C. IMPLICIT_TRANSACTIONS
D. REMOTE_PROC_TRANSACTIONS

Correct Answer: B
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 35
You have a table named JobCandidate. You are tasked to delete a row in the JobCandidate table. You need to write a transaction that allows the database to be restored to the exact point the record was deleted without knowing the time of execution. Which query should you use?

A. BEGIN TRANSACTION
   DELETE FROM JobCandidate
   WHERE JobCandidateID = 10;
   COMMIT TRANSACTION;
B. BEGIN TRANSACTION WITH MARK N'Deleting a Job Candidate';

```
DELETE FROM JobCandidate
WHERE JobCandidateID = 10;
COMMIT TRANSACTION;
```

C.
```
BEGIN TRANSACTION Delete_Candidate WITH MARK
DELETE FROM JobCandidate
WHERE JobCandidateID = 10;
COMMIT TRANSACTION Delete_Candidate;
```

D.
```
DECLARE @CandidateName varchar(50) = 'Delete_Candidate'
BEGIN TRANSACTION @CandidateName
DELETE FROM JobCandidate
WHERE JobCandidateID = 10;
COMMIT TRANSACTION @CandidateName;
```

Correct Answer: C
Section: Section 2
Explanation

Explanation/Reference:
```
BEGIN { TRAN | TRANSACTION }
   [ { transaction_name | @tran_name_variable }
     [ WITH MARK [ 'description' ] ]
   ]
[ ; ]
```

WITH MARK ['description'] - specifies that the transaction is marked in the log. description is a string that describes the mark.

If WITH MARK is used, a **transaction name must be specified**. When restoring a database to an earlier state, the marked transaction can be used in place of a date and time.

The mark is placed in the transaction log only if the database is updated by the marked transaction. Transactions that do not modify data are not marked.

BEGIN TRAN new_name WITH MARK can be nested within an already existing transaction that is not marked. Upon doing so, new_name becomes the mark name for the transaction, despite the name that the transaction may already have been given.

QUESTION 36
You have the following table named Sales.
You need to return sales data ordered by customer name and date of sale. For each customer, the most recent sale must be listed first.
Which query should you use?

A.
```
SELECT CustomerName, SalesDate
FROM Sales
ORDER BY CustomerName, SalesDate;
```

B.
```
SELECT CustomerName, SalesDate
FROM Sales
ORDER BY SalesDate DESC, CustomerName;
```

C.
```
SELECT CustomerName, SalesDate
FROM Sales
ORDER BY CustomerName, SalesDate DESC;
```

D.
```
SELECT CustomerName, SalesDate
FROM Sales ORDER BY CustomerName DESC;
```

Correct Answer: C
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 37
You have a table named Sales.SalesOrderHeader and a table named Person.Person. You are tasked to write a query that returns SalesOrderID and SalesPersonName that have an OrderDate greater than 20040101. SalesPersonName should be made up by concatenating the columns named FirstName and LastName from the table named Person.Person. You need to write a query to return data, sorted in alphabetical order, by the concatenation of FirstName and LastName. Which Transact-SQL statement should you use?

A. SELECT SalesOrderID, FirstName + ' ' + LastName as SalesPersonName FROM Sales.
SalesOrderHeader H
JOIN Person.Person P on BusinessEntityID = H.SalesPersonID
WHERE OrderDate > '20040101' ORDER BY FirstName ASC, LastName ASC
B. SELECT SalesOrderID, FirstName + ' ' + LastName as SalesPersonName FROM Sales.
SalesOrderHeader H
JOIN Person.Person P on BusinessEntityID = H.SalesPersonID
WHERE OrderDate > '20040101' ORDER BY FirstName DESC, LastName DESC
C. SELECT SalesOrderID, FirstName +' ' + LastName as SalesPersonName FROM Sales.
SalesOrderHeader H
JOIN Person.Person P on BusinessEntityID = H.SalesPersonID
WHERE OrderDate > '20040101' ORDER BY SalesPersonName ASC
D. SELECT SalesOrderID, FirstName + ' ' + LastName as SalesPersonName FROM Sales.
SalesOrderHeader H
JOIN Person.Person P on BusinessEntityID = H.SalesPersonID
WHERE OrderDate > '20040101' ORDER BY SalesPersonName DESC

Correct Answer: C
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 38
You have a table named Sales.PotentialClients. This table contains a column named EmailAddress.
You are tasked to develop a report that returns valid ".com" email addresses from Sales.PotentialClients.
A valid email address must have at least one character before the @ sign, and one character after the @ sign and before the ".com."
You need to write a Transact-SQL statement that returns data to meet the business requirements.
Which Transact-SQL statement should you use?

A. select * from Sales.PotentialClients
where EmailAddress like '_%@_%.com'
B. select * from Sales.PotentialClients
where EmailAddress like '%@%.com'
C. select * from Sales.PotentialClients
where EmailAddress like '_%@_.com'
D. select * from Sales.PotentialClients
where EmailAddress like '%@%[.]com'

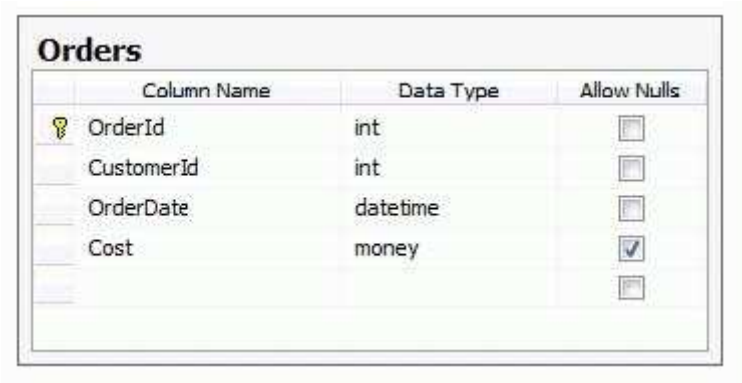
Correct Answer: C
Section: Section 2
Explanation

Explanation/Reference:
If "at least" expression refer to both "one character before..." and "one character after...", then A is correct.
If "at least" expression refer to only "one character before..." which seems the case, then C is correct.

QUESTION 39
You have a table named Orders. OrderID is defined as an IDENTITY(1,1). OrderDate has a default value of 1.
You need to write a query to insert a new order into the Orders table for CustomerID 45 with today's date

and a cost of 89.00.
Which statement should you use?

Exhibit:



A. INSERT INTO Orders (CustomerId, OrderDate, Cost) VALUES (45, DEFAULT, 89.00);
B. INSERT INTO Orders (OrderID, CustomerId, OrderDate, Cost) VALUES (1, 45, DEFAULT, 89.00);
C. INSERT INTO Orders (CustomerId, OrderDate, Cost) VALUES (45, CURRENT_TIMESTAMP, 89.00);
D. INSERT INTO Orders (OrderID, CustomerId, OrderDate, Cost) VALUES (1, 45, CURRENT_TIMESTAMP, 89.00);

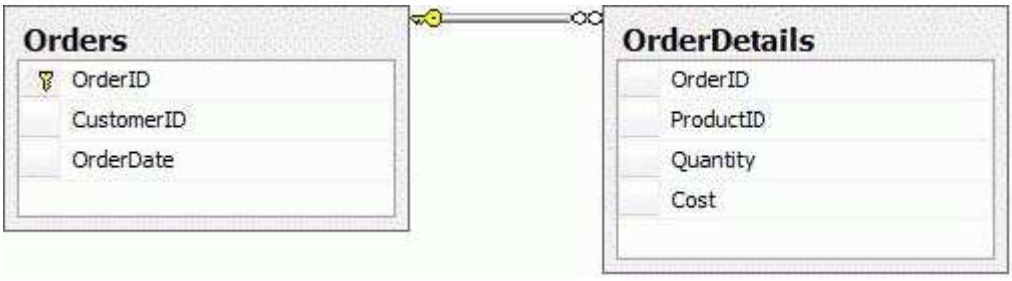
Correct Answer: C
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 40
You have the following two tables.

The foreign key relationship between these tables has CASCADE DELETE enabled.
You need to remove all records from the Orders table.
Which Transact-SQL statement should you use?

Exhibit:



A. DROP TABLE Orders
B. DELETE FROM Orders
C. TRUNCATE TABLE Orders
D. DELETE FROM OrderDetails

Correct Answer: B
Section: Section 2
Explanation

Explanation/Reference:

QUESTION 41
You have been tasked to delete 1000 rows from a table named NewWidgets. There are 2000 rows in which the column ToBeDeleted set to 1.
You need to write a Transact-SQL batch that will delete exactly 1000 rows.
Which Transact-SQL batch should you use?

A.
```
DELETE TOP (1000) dbo.NewWidgets
WHERE ToBeDeleted = 1;
```
B.
```
DECLARE @BatchSize INT = 10;

WHILE (@BatchSize = 10)
DELETE TOP (@BatchSize) dbo.NewWidgets
WHERE ToBeDeleted = 1;
```
C.
```
DELETE TOP (SELECT COUNT(*) FROM dbo.NewWidgets WHERE ToBeDeleted = 1)
FROM dbo.NewWidgets w
WHERE w.ToBeDeleted = 1;
```
D.
```
DECLARE @TotalRowCount INT = 0;
WHILE (@TotalRowCount <= 1000)
BEGIN
DELETE TOP (10) dbo.NewWidgets
WHERE ToBeDeleted = 1;
SET @TotalRowCount += @@ROWCOUNT;
END
```

Correct Answer: A
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 42
You have tables named Sales.SalesOrderDetails and Sales.SalesOrderHeader.
You have been tasked to update the discount amounts for the sales of a particular salesperson. You need to set UnitPriceDiscount to 0.1 for all entries in Sales.SalesOrderDetail that only correspond to SalesPersonID 290. Which Transact-SQL statement should you use?

A.
```
UPDATE d
SET UnitPriceDiscount = .1
FROM Sales.SalesOrderDetail d
  INNER JOIN Sales.SalesOrderHeader h ON h.SalesOrderID = d.SalesOrderID
WHERE h.SalesPersonID = 290;
```
B.
```
UPDATE Sales.SalesOrderDetail
SET UnitPriceDiscount = .1
FROM Sales.SalesOrderHeader h
WHERE h.SalesPersonID = 290;
```
C.
```
UPDATE Sales.SalesOrderDetail
SET UnitPriceDiscount = .1
WHERE EXISTS (
        SELECT * FROM Sales.SalesOrderHeader h
        WHERE h.SalesPersonID = 290);
```
D.
```
UPDATE Sales.SalesOrderDetail
SET UnitPriceDiscount = .1 FROM Sales.SalesOrderDetail d
WHERE EXISTS (
        SELECT * FROM Sales.SalesOrderHeader h
        WHERE h.SalesPersonID = 290);
```

Correct Answer: A
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 43
You have a table named Product.
You need to increase product prices for only the vendor named Coho Winery by 10 percent and then return a list of the products and updated prices.
Which code segment should you use?

A. UPDATE Product SET Price = Price * 1.10, ProductName = ProductName
   WHERE Product.VendorName = 'Coho Winery'
B. UPDATE Product
   SET Price = Price * 1.10
   OUTPUT inserted.ProductName, deleted.Price
   WHERE Product.VendorName = 'Coho Winery'
C. UPDATE Product
   SET Price = Price * 1.10
   OUTPUT inserted.ProductName, inserted.Price
   WHERE Product.VendorName = 'Coho Winery'
D. UPDATE Product
   SET Price = Price * 1.10, VendorName = 'Coho Winery'
   OUTPUT inserted.ProductName, inserted.Price

Correct Answer: C
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 44
You have two tables named dbo.Products and dbo.PriceChange. Table dbo.Products contains ten products. Five products are priced at $20 per unit and have PriceIncrease set to 1. The other five products are priced at $10 per unit and have PriceIncrease set to 0.
You have the following query:

```
INSERT dbo.PriceChange (ProductID, Change, ChangeDate)
SELECT ProductID, inPrice -delPrice, SYSDATETIME()
FROM
(
UPDATE dbo.Products
SET Price *= 1.1
OUTPUT inserted.ProductID, inserted.Price, deleted.Price
WHERE PriceIncrease = 1 ) p (ProductID, inPrice, delPrice);
```

You need to predict the results of the query. Which results should the query produce?

A. Five rows are updated in dbo.Products.
   Five rows are inserted into dbo.PriceChange.
B. Five rows are updated in dbo.Products.
   No rows are inserted into dbo.PriceChange.
C. No rows are updated in dbo.Products.
   Five rows are inserted into dbo.PriceChange.
D. No rows are updated in dbo.Products.
   No rows are inserted into dbo.PriceChange.

Correct Answer: A
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 45
You have two tables named MainTable and ArchiveTable.
You need to move data older than 30 days from MainTable into ArchiveTable.
Which code segment should you use?

A. DELETE FROM MainTable
   OUTPUT deleted.*
   WHERE RecordDate < DATEADD(D,-30,GETDATE())
B. DELETE FROM MainTable
   OUTPUT DELETED.* INTO ArchiveTable
   WHERE RecordDate < DATEADD(D,-30,GETDATE())
C. INSERT INTO ArchiveTable
   SELECT * FROM MainTable WHERE RecordDate < DATEADD(D,-30,GETDATE())
D. INSERT INTO ArchiveTable
   SELECT * FROM MainTable WHERE RecordDate < DATEADD(D,-30,GETDATE())
   DELETE FROM MainTable

Correct Answer: B
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 46
You have been tasked with creating a table named dbo.Widgets. You need to insert five rows into the dbo. Widgets table and return WidgetID for each of the five rows that have been inserted. Which Transact-SQL batch should you use?

A. CREATE TABLE dbo.Widgets (WidgetID INT IDENTITY PRIMARY KEY, WidgetName VARCHAR (25));
   GO
   INSERT dbo.Widgets (WidgetName)
   OUTPUT inserted.WidgetID, inserted.WidgetName
   VALUES ('WidgetOne'),('WidgetTwo'),('WidgetThree'),('WidgetFour'),('WidgetFive');
B. CREATE TABLE dbo.Widgets (WidgetID INT IDENTITY PRIMARY KEY, WidgetName VARCHAR (25));
   GO
   INSERT dbo.Widgets (WidgetName)
   VALUES ('WidgetOne'),('WidgetTwo'),('WidgetThree'),('WidgetFour'),('WidgetFive');
   SELECT SCOPE_IDENTITY();
C. CREATE TABLE dbo.Widgets (WidgetID UNIQUEIDENTIFIER PRIMARY KEY, WidgetName VARCHAR(25));
   GO
   INSERT dbo.Widgets (WidgetName)
   VALUES ('WidgetOne'),('WidgetTwo'),('WidgetThree'),('WidgetFour'),('WidgetFive');
   SELECT SCOPE_IDENTITY();
D. CREATE TABLE dbo.Widgets (WidgetID UNIQUEIDENTIFIER PRIMARY KEY, WidgetName VARCHAR(25));
   GO
   INSERT dbo.Widgets (WidgetName)
   OUTPUT inserted.WidgetID, inserted.WidgetName
   VALUES ('WidgetOne'),('WidgetTwo'),('WidgetThree'),('WidgetFour'),('WidgetFive');

Correct Answer: A
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 47

You have the following two tables.
Products

ProductID	ProductName	VendorID
1	Product1	0
2	Product2	1
3	Product3	1
4	Product4	0

ProductChanges

ProductID	ProductName	VendorID
1	Product1	1
2	Product2	1
3	NewProduct3	2
5	Product5	1

You execute the following statement.

```
MERGE Products USING ProductChanges ON (Products.ProductID = ProductChanges.
ProductID)
WHEN MATCHED AND Products.VendorID = 0 THEN DELETE WHEN MATCHED
THEN UPDATE SET Products.ProductName = ProductChanges.ProductName Products.
VendorID = ProductChanges.VendorID;
```

You need to identify the rows that will be displayed in the Products table. Which rows will be displayed?

A.

ProductID	ProductName	VendorID
2	Product2	1
3	NewProduct3	2

B.

ProductID	ProductName	VendorID
2	Product2	1
3	NewProduct3	2
4	Product4	0

C.

ProductID	ProductName	VendorID
1	Product1	1
2	Product2	1
3	NewProduct3	2
5	Product5	1

D.

ProductID	ProductName	VendorID
1	Product1	1
2	Product2	1
3	NewProduct3	2
4	Product4	0
5	Product5	1

Correct Answer: B
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 48
You have two tables.
A table named Student.CurrentStudents contains the names of all students enrolled for the current year.
Another table named Student.NewYearRoster contains the names of students who have enrolled for the upcoming year.
You have been tasked to write a MERGE statement to:

Insert into Student.CurrentStudents the names of students who are enrolled for the upcoming year but not for the current year.
Update information in Student.CurrentStudents for students who are enrolled both in the current year and in the upcoming year.
Delete from Student.CurrentStudents the names of students who are not enrolled for the upcoming year.
You need to write the appropriate MERGE statement. Which Transact-SQL statement should you use?

A. MERGE Student.CurrentStudents AS T USING Student.NewYearRoster AS S ON S.LastName = T.

LastName AND S.FirstName = T.FirstName
WHEN MATCHED THEN UPDATE SET Address = S.Address, Age = S.Age
WHEN NOT MATCHED BY TARGET THEN INSERT (LastName, FirstName, Address, Age) VALUES (S.LastName, S.FirstName, S.Address, S.Age)
WHEN NOT MATCHED BY SOURCE THEN DELETE;

B. MERGE Student.CurrentStudents AS T USING Student.NewYearRoster AS S ON S.LastName = T.LastName AND S.FirstName = T.FirstName
WHEN MATCHED THEN DELETE
WHEN NOT MATCHED THEN INSERT (LastName, FirstName, Address, Age) VALUES (S.LastName, S.FirstName, S.Address, S.Age)
WHEN NOT MATCHED BY SOURCE THEN UPDATE SET Address = T.Address, Age = T.Age;

C. MERGE Student.CurrentStudents AS T USING Student.NewYearRoster AS S ON S.LastName = T.LastName AND S.FirstName = T.FirstName
WHEN MATCHED AND NOT T.Address = S.Address OR NOT T.Age = S.Age THEN UPDATE SET T.Address = S.Address, T.Age = S.Age
WHEN NOT MATCHED THEN INSERT (LastName, FirstName, Address, Age) VALUES (S.LastName, S.FirstName, S.Address, S.Age)
WHEN MATCHED THEN DELETE;

D. MERGE Student.CurrentStudents AS T USING Student.NewYearRoster AS S ON S.LastName = T.LastName AND S.FirstName = T.FirstName
WHEN MATCHED AND NOT T.Address = S.Address AND NOT T.Age = S.Age THEN UPDATE SET T.Age = S.Age, T.Address = S.Address
WHEN NOT MATCHED BY TARGET THEN INSERT (LastName, FirstName, Address, Age) VALUES (S.LastName, S.FirstName, S.Address, S.Age)
WHEN NOT MATCHED BY SOURCE THEN DELETE;

Correct Answer: A
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 49
You create and populate two tables by using the following Transact-SQL statements:

```
CREATE TABLE CurrentStudents (LastName VARCHAR(50), FirstName VARCHAR(50),
Address VARCHAR(100), Age INT);
INSERT INTO CurrentStudents VALUES ('Fritz', 'David', '181 Kline Street', 14)
,('Reese', 'Paul' , '4429 South Union', 14)
,('Brown', 'Jake' ,  '5401 Washington Ave',14)
,('Smith', 'Tom' ,  '124 Water St',  14)
,('Holtz', 'Mary' ,  '984 Mass Ct',  14)
,('Robbins', 'Jan' ,  '4449 Union Ave',  14)
,('Larsen', 'Frank' ,  '5812 Meadow St',  14)
,('Bishop', 'Cathy' ,  '14429 Skyhigh Ave',  14)
,('Francis', 'Thomas' , '15401 120th St', 14)
CREATE TABLE NewYearRoster(LastName VARCHAR(50), FirstName VARCHAR(50), Address
VARCHAR(100), Age INT);
INSERT INTO NewYearRoster VALUES ('Fritz', 'David', '181 Kline Street', 15)
,('Reese', 'Paul', '1950 Grandview Place', 15)
,('Adams', 'Wilbur', '4231 W. 93rd', 15)
,('Adams', 'Norris', '100 1st Ave', 15)
,('Thomas', 'Paul', '18176 Soundview Dr', 15)
,('Linderson', 'Danielle', '941 W. 37 Ave', 15)
,('Moore', 'Joshua', '2311 10st Ave', 15)
,('Dark', 'Shelby', '1987 Fifth Ave', 15)
,('Scharp', 'Mary', '1902 W. 303rd', 15)
,('Morris', 'Walt', '100 12st St', 15);
```

You run the following MERGE statement to update, insert and delete rows in the CurrentStudents table

```
MERGE TOP (3) CurrentStudents AS T
USING NewYearRoster AS S ON S.LastName = T.LastName AND S.FirstName = T.
FirstName
```

```
WHEN MATCHED AND NOT (T.Age = S.Age OR T.Address = S.Address) THEN UPDATE SET
Address = S.Address, Age = S.Age
WHEN NOT MATCHED BY TARGET THEN INSERT (LastName, FirstName, Address, Age)
VALUES (S.LastName, S.FirstName, S.Address, S.Age)
WHEN NOT MATCHED BY SOURCE THEN DELETE;
```

You need to identify the total number of rows that are updated, inserted, and deleted in the CurrentStudent table. Which total number of rows should you choose?

A. 0
B. 3
C. 6
D. 9

Correct Answer: B
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 50
You are writing a query that returns a list of products that have grossed more than $10,000.00 during the year 2007.
You need to insert the following filter expression into the query.

`SUM([Order Details].UnitPrice * [Order Details].Quantity) > 10000` Into which clause should you insert this expression?

A. ON
B. WHERE
C. HAVING
D. GROUP BY

Correct Answer: C
Section: Section 3
Explanation

Explanation/Reference:

```
SELECT P.Name AS ProductName
FROM  Sales.SalesOrderHeader AS H
    INNER JOIN Sales.SalesOrderDetail AS [Order Details]
        ON H.SalesOrderID = [Order Details].SalesOrderID
    INNER JOIN Production.Product AS P
        ON [Order Details].ProductID = P.ProductID
WHERE H.OrderDate >= '20070101' AND OrderDate < '20080101'
GROUP BY P.Name
HAVING (SUM([Order Details].UnitPrice * [Order Details].OrderQty)) > 10000;
```

QUESTION 51
You have a table named Sales. You are tasked to list products that have been sold to less than ten customers.
You need to write a query to achieve the task.
Which Transact-SQL statement should you use?

A. SELECT ProductID, COUNT(*) AS CustomerCount
   FROM Sales
   GROUP BY ProductID, CustomerID
   HAVING COUNT(*) < 10;
B. SELECT ProductID, COUNT(DISTINCT CustomerID) AS CustomerCount
   FROM Sales
   GROUP BY ProductID

HAVING COUNT(DISTINCT CustomerID) < 10;

C. SELECT ProductID, CustomerID, COUNT(DISTINCT CustomerID) AS CustomerCount
FROM Sales
GROUP BY ProductID, CustomerID
HAVING COUNT(DISTINCT CustomerID) < 10;

D. SELECT *
FROM (SELECT ProductID, RANK() OVER (ORDER BY CustomerID DESC) AS Rnk FROM Sales) s
WHERE s.Rnk <= 10;

Correct Answer: B
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 52
You have two tables named Customers and Orders.
for customers that have placed at least one order, you need to produce a list of customer names and the number of orders for each customer.
Which query should you use?

A. SELECT c.CustomerName, SUM(o.OrderID) AS [OrderCount]
FROM Customers c
JOIN Orders o ON c.CustomerID = o.CustomerID
GROUP BY c.CustomerName

B. SELECT COUNT(o.OrderId) AS [OrderCount]
FROM CUSTOMERS c
JOIN ORDERS o ON c.CUSTOMERID = o.CUSTOMERID

C. SELECT c.CustomerName, COUNT(o.OrderID) AS [OrderCount]
FROM Customers c
JOIN Orders o ON c.CustomerID = o.CustomerID
GROUP BY c.CustomerName
HAVING COUNT(o.OrderID) > 1

D. SELECT c.CustomerName, COUNT(o.OrderId) AS [OrderCount]
FROM Customers c
JOIN Orders o ON c.CustomerId = o.CustomerId
GROUP BY c.CustomerName

Correct Answer: D
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 53
You have a table named Products. The table contains a column named Color.
You need to write a Transact-SQL statement that calculates the percentage of products of each product color.
Which Transact-SQL statement should you use?

A. SELECT Color, COUNT(*) OVER(PARTITION BY Color) / (COUNT(*) * 1.0) AS PercentColor
FROM Products
GROUP BY Color;

B. SELECT Color, COUNT(*) OVER() / (COUNT(*) * 1.0) AS PercentColor / (COUNT(*) * 1.0) AS PercentColor
FROM Products
GROUP BY Color;

C. SELECT Color, (COUNT(*) * 1.0)/ COUNT(*) OVER() AS PercentColor
FROM Products
GROUP BY Color;

D. SELECT Color, COUNT(*) * 1.0) / COUNT(*) OVER(PARTITION BY Color) AS PercentColor
FROM Products
GROUP BY Color;

Correct Answer: C
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 54
You have two tables named SalesPerson and SalesTerritory.
You need to create sample data by using a Cartesian product that contains the data from the SalesPerson and SalesTerritory tables.
Which code segment should you use?

A. SELECT p.SalesPersonId, t.Name AS [Territory]
FROM Sales.SalesPerson p FULL JOIN Sales.SalesTerritory t ON p.TerritoryId = t.TerritoryId
B. SELECT p.SalesPersonId, Name AS [Territory]
FROM Sales.SalesPerson p INNER JOIN Sales.SalesTerritory t ON p.TerritoryId = t.TerritoryId
C. SELECT p.SalesPersonId, t.Name AS [Territory] FROM Sales.SalesPerson p
CROSS JOIN Sales.SalesTerritory t WHERE p.TerritoryId = t.TerritoryId
D. SELECT p.SalesPersonId, t.Name AS [Territory] FROM Sales.SalesPerson p
CROSS JOIN Sales.SalesTerritory t;

Correct Answer: D
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 55
You have a table named Employees.
You want to identify the supervisor to which each employee reports. You write the following query.

```
SELECT e.EmloyeeName AS [EmployeeName], s.EmployeeName AS [SuperVisorName] FROM
Employees e
```

You need to ensure that the query returns a list of all employees and their respective supervisor. Which join clause should you use to complete the query?

A. LEFT JOIN Employees s ON e.ReportsTo = s.EmployeeId
B. RIGHT JOIN Employees s ON e.ReportsTo = s.EmployeeId
C. INNER JOIN Employees s ON e.EmployeeId = s.EmployeeId
D. LEFT JOIN Employees s ON e.EmployeeId = s.EmployeeId

Correct Answer: A
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 56
You have a table named Subcategories that contains subcategories for socks, vests and helmets. You have another table named Products that contains products only from the subcategories socks and vests.
You have the following query:

```
SELECT s.Name, p.Name AS ProductName
FROM Subcategories s OUTER APPLY (SELECT * FROM Products pr WHERE pr.
SubcategoryID = s.SubcategoryID) p
```

```
WHERE s.Name IS NOT NULL;
```
You need to predict the results of the query. What results should the query produce?

A.
Name	ProductName
Socks	Mountain Bike
Socks, Socks	Mountain Bike
Socks, Socks	Racing Socks, M
Socks	Racing Socks, L
Vests	Classic Vest, S
Vests	Classic Vest, M
Vests	Classic Vest, L

B.
Name	ProductName
Socks	Mountain Bike
Socks, Socks	Mountain Bike
Socks, Socks	Racing Socks, M
Socks	Racing Socks, L
Vests	Classic Vest, S
Vests	Classic Vest, M
Vests	Classic Vest, L
Helmets	NULL

C.
Name	ProductName
Socks	Mountain Bike
Socks, Socks	Mountain Bike
Socks, Socks	Racing Socks, M
Socks	Racing Socks, L
Vests	Classic Vest, S
Vests	Classic Vest, M
Vests	Classic Vest, L
Helmets	NULL
NULL	NULL

D.
Name	ProductName
Socks	Mountain Bike
Socks, Socks	Mountain Bike
Socks, Socks	Racing Socks, M
Socks	Racing Socks, L
Vests	Classic Vest, S
Vests	Classic Vest, M
Vests	Classic Vest, L
NULL	Mountain Bike
Socks, NULL	Mountain Bike
Socks, NULL	Racing Socks, M
NULL	Racing Socks, L
NULL	Classic Vest, S
NULL	Classic Vest, M
NULL	Classic Vest, L
Helmets	NULL
NULL	NULL

Correct Answer: B
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 57
You have two tables named dbo.CurrentProducts and dbo.ArchiveProducts. You have the following query:

```
SELECT ProductID, Name FROM dbo.CurrentProducts
UNION ALL
SELECT ProductID, Name FROM dbo.ArchiveProducts;
```

You need to predict the list of products that the query will produce. Which list of products should the query return?

A. Products that appear in dbo.CurrentProducts or dbo.ArchiveProducts but not in both.
B. Products that have a matching ProductID and Name in dbo.CurrentProducts or dbo.ArchiveProducts.
C. Products that appear in dbo.CurrentProducts or dbo.ArchiveProducts. Products that appear in both tables are listed only once.
D. Products that appear in dbo.CurrentProducts or dbo.ArchiveProducts. Products that appear in both tables are listed multiple times.

Correct Answer: D
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 58
You have two tables named Products and NewProducts that have identical structures. You have the following query (Line numbers are included for reference only):

```
01     SELECT Product, Description
02     FROM dbo.Products
03     ........
04     SELECT Product, Description
05     FROM dbo.NewProducts
```

You need to choose the appropriate Transact-SQL operator to display rows that exist in both tables.
Which Transact-SQL operator should you insert in line 03?

A. UNION
B. EXCEPT
C. UNION ALL
D. INTERSECT

Correct Answer: D
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 59
You are tasked to create a table that has a column that must store the current time accurate to ten microseconds.
You need to use a system function in conjunction with the DEFAULT option in the column definition.
Which system function should you use?

A. DATEADD
B. GETUTCDATE
C. SYSDATETIME
D. CURRENT_TIMESTAMP

Correct Answer: C
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 60
You need to round the value 1.75 to the nearest whole number.
Which code segment should you use?

A. Select ROUND(1.75,0)

B. Select ROUND(1.75,2)
C. Select ROUND(1.75,1.0)
D. Select ROUND(1.75,2.0)

Correct Answer: A
Section: Section 3
Explanation

Explanation/Reference:

QUESTION 61
You have a column named TelephoneNumber that stores numbers as varchar(20). You need to write a query that returns the first three characters of a telephone number. Which expression should you use?

A. LEFT(TelephoneNumber, 3)
B. SUBSTRING(TelephoneNumber, 3, 3)
C. SUBSTRING (TelephoneNumber, 3, 1)
D. CHARINDEX('[0-9][0-9][0-9]', TelephoneNumber, 3)

Correct Answer: A
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 62
You are a database developer located in Seattle. You have a client in Melbourne, which is in a different time zone from Seattle. You have been using the datetimeoffset data type and storing data by using the Seattle offset.
You need to display the dates in the Melbourne offset.
Which function should you use?

A. CONVERT
B. DATEADD
C. SWITCHOFFSET
D. TODATETIMEOFFSET

Correct Answer: C
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 63
You have a database that contains two tables named ProductCategory and ProductSubCategory.
You need to write a query that returns a list of product categories that contain more than ten sub-categories.
Which query should you use?

A. SELECT [Name] FROM ProductSubCategory
WHERE ProductCategoryID IN (
SELECT ProductCategoryID FROM ProductCategory)
GROUP BY [Name] HAVING COUNT(*) > 10)
B. SELECT [Name] FROM ProductSubCategory
WHERE ProductCategoryID NOT IN (
SELECT ProductCategoryID FROM ProductCategory)
GROUP BY [Name] HAVING COUNT(*) > 10)

C. SELECT [Name] FROM Product Category c
WHERE EXISTS (
SELECT ProductCategoryID FROM ProductSubCategory
WHERE ProductCategoryID = c.ProductCategoryID
GROUP BY ProductCategoryID
HAVING COUNT(*) > 10)

D. SELECT [Name] FROM Product Category c
WHERE NOT EXISTS (
SELECT ProductCategoryID FROM ProductSubCategory
WHERE ProductCategoryID = c.ProductCategoryID
GROUP BY ProductCategoryID
HAVING COUNT(*) > 10)

Correct Answer: C
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 64
Your database contains sales information for millions of orders.
You need to identify the orders with the highest average unit price and an order total greater than 10,000.
The list should contain no more than 20 orders.
Which query should you use?

A. SELECT TOP (20) o.SalesOrderId, o.OrderDate, o.Total, SUM(od.QTY * od.UnitPrice) / SUM(od.Qty) AS [AvgUnitPrice]
FROM Sales.SalesOrderHeader o
JOIN SALES.SalesOrderDetail od ON o.SalesOrderId = od.SalesOrderId
WHERE o.Total> 10000
GROUP BY o.SalesOrderId, o.OrderDate, o.Total
ORDER BY AvgUnitPrice;

B. SELECT TOP (20) o.SalesOrderId, o.OrderDate, o.Total,
(SELECT SUM(od.Qty * od.UnitPrice) / SUM(od.QTY) FROM Sales.SalesOrderDetail od WHERE o.SalesOrderId = od.SalesOrderId) AS [AvgUnitPrice]
FROM Sales.SalesOrderHeader o WHERE o.Total> 10000 ORDER BY AvgUnitPrice DESC;

C. SELECT TOP (20) o.SalesOrderId, o.OrderDate, o.Total, SUM(od.Qty * od.UnitPrice) / SUM(od.Qty) AS [AvgUnitPrice]
FROM Sales.SalesOrderHeader o
JOIN Sales.SalesOrderDetail od ON o.SalesOrderId = od.SalesOrderId
WHERE o.Total> 10000
GROUP BY o.SalesOrderId, o.OrderDate, o.Total
ORDER BY Total DESC;

D. SELECT TOP (20) o.SalesOrderId, o.OrderDate, o.Total,
(SELECT SUM(od.Qty * od.UnitPrice) / SUM(od.Qty) FROM Sales.SalesOrderDetail od WHERE o.SalesOrderId = od.SalesOrderId) AS [AvgUnitPrice]
FROM Sales.SalesOrderHeader o
WHERE o.Total > 10000
ORDER BY o.Total DESC,
AvgUnitPrice;

Correct Answer: B
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 65
Your company stores vendor and price information in a database. All items in the database have a list price.
You need to increase the list price for all products of only the vendor named Fabrikam by 20.00.

Which query should you use?

A. UPDATE Production.Product
SET ListPrice = ListPrice + 20.00
WHERE NOT EXISTS (
SELECT VendorId FROM Purchasing.Vendor
WHERE VendorName = 'Fabrikam');

B. UPDATE Production.Product SET ListPrice = ListPrice + 20.00
WHERE VendorId NOT IN (
SELECT VendorId FROM Purchasing.Vendor
WHERE VendorName = 'Fabrikam');

C. UPDATE Production.Product SET ListPrice = ListPrice + 20.00
WHERE EXISTS (
SELECT VendorId FROM Purchasing.Vendor
WHERE VendorName = 'Fabrikam');

D. UPDATE Production.Product SET ListPrice = ListPrice + 20.00 WHERE VendorId IN
(SELECT VendorId FROM Purchasing.Vendor
WHERE VendorName = 'Fabrikam');

Correct Answer: D
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 66
You have two tables named Customer and SalesOrder.
You need to identify all customers that have not yet made any purchases and those that have only made orders with an OrderTotal less than 100.
Which query should you use?

A. SELECT * FROM Customer
WHERE 100 > ALL (
SELECT OrderTotal FROM SalesOrder
WHERE Customer.CustomerID = SalesOrder.CustomerID)

B. SELECT * FROM Customer
WHERE 100 > SOME (
SELECT OrderTotal FROM SalesOrder
WHERE Customer.CustomerID = SalesOrder.CustomerID)

C. SELECT * FROM Customer
WHERE 100 > (
SELECT MAX(OrderTotal) FROM SalesOrder
WHERE Customer.CustomerID = SalesOrder.CustomerID)

D. SELECT * FROM Customer
WHERE EXISTS (
SELECT SalesOrder.CustomerID FROM SalesOrder
WHERE Customer.CustomerID = SalesOrder.CustomerID AND SalesOrder.OrderTotal <= 100)

Correct Answer: A
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 67
You have two tables named Customer and SalesOrder.
In the Customer table you have 1000 customers, of which 900 customers have orders in the SalesOrder table.
You execute the following query to list all customers that have had at least one sale.

```
SELECT * FROM Customer WHERE Customer.CustomerID IN (SELECT Customer.CustomerID
FROM SalesOrder)
```

You need to identify the results of the query. Which results will the query return?

A. No rows
B. A warning message
C. The 1000 rows in the Customer table
D. The 900 rows in the Customer table with matching rows in the SalesOrder table

Correct Answer: C
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 68
You have the following rows in the
Customer Table:

CustomerId	Status
1	Active
2	Active
3	Inactive
4	NULL
5	Dormant
6	Dormant

You write the following query to return all customers that do not have NULL or 'Dormant' for their status:

```
SELECT * FROM Customer
WHERE Status NOT IN (NULL, 'Dormant')
```

You need to identify the results of the query.
Which result should you expect?

A.

CustomerId	Status

B.

CustomerId	Status
1	Active
2	Active
3	Inactive

C.

CustomerId	Status
1	Active
2	Active
3	Inactive
4	NULL

D.

CustomerId	Status
1	Active
2	Active
3	Inactive
4	NULL
5	Dormant
6	Dormant

Correct Answer: A
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 69

You have a table named Employee.
You document your company's organizational hierarchy by inserting the EmployeeID of each employee's manager in the ReportsTo column.
You need to write a recursive query that produces a list of employees and their manager.
The query must also include the employee's level in the hierarchy.
You write the following code segment. (Line numbers are included for reference only.)

```
01     WITH EmployeeList (EmployeeID, FullName, ManagerName, Level)
02     AS (
03    .........
04     )
05     SELECT EmployeeID, FullName, ManagerName, Level
06     FROM EmployeeList;
```

Which code segment should you insert at line 3?

A. SELECT EmployeeID, FullName, '' AS [ReportsTo], 1 AS [Level]
   FROM Employee WHERE ReportsTo IS NULL
   UNION ALL
   SELECT emp.EmployeeID, emp.FullNName, mgr.FullName, 1 + 1 AS [Level]
   FROM Employee emp
   JOIN Employee mgr ON emp.ReportsTo = mgr.EmployeeID
B. SELECT EmployeeID, FullName, '' AS [ReportsTo], 1 AS [Level]
   FROM Employee WHERE ReportsTo IS NULL
   UNION ALL
   SELECT emp.EmployeeID, emp.FullName, mgr.FullName, mgr.Level + 1
   FROM EmployeeList mgr
   JOIN Employee emp ON emp.ReportsTo = mgr.EmployeeId
C. SELECT EmployeeID, FullName, '' AS [Reports To], 1 AS [Level]
   FROM Employee
   UNION ALL
   SELECT emp.EmployeeID, emp.FullName, mgr.FullName, 1 + 1 AS [Level]
   FROM Employee emp
   LEFT JOIN Employee mgr ON emp.ReportsTo = mgr.EmployeeID
D. SELECT EmployeeID, FullName, '' AS [ReportsTo], 1 AS [Level]
   FROM Employee
   UNION ALL
   SELECT emp.EmployeeID, emp.FullName, mgr.FullName, mgr.Level + 1
   FROM EmployeeList mgr
   JOIN Employee emp ON emp.ReportsTo = mgr.EmployeeID

Correct Answer: B
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 70
You need to determine the result of executing this code segment.

```
DECLARE @RangeStart INT = 0;
DECLARE @RangeEnd INT = 10000;
DECLARE @RangeStep INT = 1;

WITH NumberRange(ItemValue)
AS (
SELECT ItemValue
FROM (SELECT @RangeStart AS ItemValue) AS t
UNION ALL
SELECT ItemValue + @RangeStep
FROM NumberRange
WHERE ItemValue < @RangeEnd)

SELECT ItemValue
```

```
FROM NumberRange
OPTION (MAXRECURSION 100)
```

Which result will be returned?

A. 101 rows will be returned with no error.
B. 10,001 rows will be returned with no error.
C. 101 rows will be returned with a maximum recursion error.
D. 10,001 rows will be returned with a maximum recursion error.

Correct Answer: C
Section: Section 4
Explanation

Explanation/Reference:
MAXRECURSION number specifies the maximum number of recursions allowed for this query. number is a nonnegative integer between 0 and 32767. When 0 is specified, no limit is applied. If this option is not specified, the default limit for the server is 100.

When the specified or default number for MAXRECURSION limit is reached during query execution, the query is ended and an error is returned.

QUESTION 71
You need to implement a common table expression (CTE). Which code segment should you use?

A.
```
CREATE VIEW SalesByYear AS
SELECT Year, Region, SUM(OrderTotal)
FROM Orders
GROUP BY Year, Region;
GO
SELECT Year, Region, Total
FROM SalesByYear;
```
B.
```
WITH SalesByYear(Year,Region,Total)
AS (SELECT Year, Region, SUM(OrderTotal)
FROM Orders GROUP BY Year,Region)

SELECT Year, Region, Total FROM SalesByYear;
```
C.
```
SELECT Year, Region, Total
FROM (
SELECT Year, Region, SUM(OrderTotal) AS Total
FROM Orders
GROUP BY Year, Region) AS [SalesByYear];
```
D.
```
SELECT DISTINCT Year, Region, (
SELECT SUM(OrderTotal) FROM Orders SalesByYear
WHERE Orders.Year = SalesByYear.YEAR AND Orders.Region = SalesByYear.Region) AS [Total]
FROM Orders;
```

Correct Answer: B
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 72
You are tasked to analyze blocking behavior of the following query:

```
SET TRANSACTION ISOLATION LEVEL SERIALIZABLE
WITH Customers AS (
SELECT * FROM Customer ),
SalesTotal AS ( SELECT CustomerId, SUM(OrderTotal) AS AllOrderTotal FROM
SalesOrder)
```

```
SELECT CustomerId, AllOrderTotal
FROM SalesTotal
WHERE AllOrderTotal > 10000.00;
```

You need to determine if other queries that are using the Customer table will be blocked by this query. You also need to determine if this query will be blocked by other queries that are using the Customer table. What behavior should you expect?

A. The other queries will be blocked by this query.
   This query will be blocked by the other queries.
B. The other queries will be blocked by this query.
   This query will not be blocked by the other queries.
C. The other queries will not be blocked by this query.
   This query will be blocked by the other queries.
D. The other queries will not be blocked by this query.
   This query will not be blocked by the other queries.

Correct Answer: D
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 73
You create and populate a table named SiteNavigation by using the following statements:

```
CREATE TABLE SiteNavigation (
    SiteNavigationId INT PRIMARY KEY,
    Linktext VARCHAR(10),
    LinkUrl VARCHAR(40),
    ParentSiteNavigationId INT NULL REFERENCES SiteNavigation
(SiteNavigationId)
)
INSERT INTO SiteNavigation VALUES (1,'First','http://first',NULL)
,(2,'Second','http://second',1)
,(3,'Third','http://third',1)
,(4,'Fourth','http://fourth',2)
,(5,'Fifth','http://fifth',2)
,(6,'Sixth','http://sixth',2)
,(7,'Seventh','http://seventh',6)
,(8,'Eighth','http://eighth',7)
```

You are tasked to write a query to list all site references that are more than two levels from the root node. The query should produce the following results:

LinkText	LinkUrl	DistanceFromRoot
Fourth	http://fourth	2
Fifth	http://fifth	2
Sixth	http://sixth	2
Seventh	http://seventh	3
Eighth	http://eighth	4

You have written the following query:

```
WITH DisplayHierarchy AS (SELECT LinkText, LinkUrl, SiteNavigationId,
ParentSiteNavigationId, 0 AS DistanceFromRoot
FROM SiteNavigation
WHERE ParentSiteNavigationId IS NULL
UNION ALL
SELECT SiteNavigation.LinkText, SiteNavigation.LinkUrl, SiteNavigation.
SiteNavigationId, SiteNavigation.ParentSiteNavigationId,
dh.DistanceFromRoot + 1 AS DistanceFromRoot
FROM SiteNavigation
INNER JOIN DisplayHierarchy dh
ON SiteNavigation.ParentSiteNavigationId = dh.SiteNavigationId)
```

```
SELECT LinkText, LinkUrl, DistanceFromRoot FROM DisplayHierarchy
```

You need to append a WHERE clause to the query. Which clause should you use?

A. WHERE DistanceFromRoot =2
B. WHERE DistanceFromRoot < 2
C. WHERE DistanceFromRoot >= 2
D. WHERE DistanceFromRoot IN (2,3)

Correct Answer: C
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 74
You have two views named Sales.SalesSummaryOverall and Sales.CustomerAndSalesSummary.
They are defined as follows:

```
CREATE VIEW Sales.SalesSummaryOverall
AS
SELECT CustomerId, SUM(SalesTotal) AS OverallTotal
FROM Sales.SalesOrder
GROUP BY CustomerId

GO

CREATE VIEW Sales.CustomerAndSalesSummary
AS
SELECT Customer.Name, SalesSummaryOverall.OverallTotal, (SELECT AVG
(OverallTotal)
FROM Sales.SalesSummaryOverall
WHERE SalesSummaryOverall.CustomerId = Customer.CustomerId) AS
avgOverallTotal,
(SELECT MAX(OverallTotal) FROM Sales.SalesSummaryOverall
WHERE SalesSummaryOverall.CustomerId =Customer.CustomerId) AS maxOverallTotal,
FROM Sales.Customer
LEFT OUTER JOIN Sales. Sales.SalesSummaryOverall
ON SalesSummaryByYear.CustomerId = Customer.CustomerId
GO
```

You have been tasked to modify the Sales.CustomerAndSalesSummary view to remove references to other views.
You need to identify a feature to use in the modified version of the Sales.CustomerAndSalesSummary object to achieve the task.
Which feature should you use?

A. Table variables
B. Temporary tables
C. User-defined table types
D. Common table expressions

Correct Answer: D
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 75
You need to write a query that allows you to rank total sales for each salesperson into four groups, where

the top 25 percent of results are in group 1, the next 25 percent are in group 2, the next 25 percent are in group 3, and the lowest 25 percent are in group 4.
Which Transact-SQL statement should you use?

A. NTILE(1)
B. NTILE(4)
C. NTILE(25)
D. NTILE(100)

Correct Answer: B
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 76
You need to write a query that uses a ranking function that returns the sequential number of a row within a partition of a result set, starting at 1 for the first row in each partition.
Which Transact-SQL statement should you use?

A. RANK
B. NTILE(10)
C. DENSE_RANK
D. ROW_NUMBER

Correct Answer: D
Section: Section 4
Explanation

Explanation/Reference:
ROW_NUMBER returns the sequential number of a row within a partition of a result set, starting at 1 for the first row in each partition.

QUESTION 77
You have a table named ProductCounts that contains 1000 products as well as the number of units that have been sold for each product. You need to write a query that displays the top 5% of products that have been sold most frequently.
Which Transact-SQL code segments should you use?

A.
```
WITH Percentages AS (
SELECT *, NTILE(5) OVER (ORDER BY UnitsSold) AS groupingColumn FROM ProductCounts)
SELECT * FROM percentages
WHERE groupingColumn =1;
```
B.
```
WITH Percentages AS (
SELECT *, NTILE(5) OVER (ORDER BY UnitsSold) AS groupingColumn FROM ProductCounts)
SELECT * FROM Percentages
WHERE groupingColumn = 5;
```
C.
```
WITH Percentages AS (
SELECT *, NTILE(20) OVER (ORDER BY UnitsSold) AS groupingColumn FROM ProductCounts)
SELECT * FROM Percentages
WHERE groupingColumn = 1;
```
D.
```
WITH Percentages AS (
SELECT *, NTILE(20) OVER (ORDER BY UnitsSold) AS groupingColumn FROM ProductCounts)
SELECT * FROM Percentages
WHERE groupingColumn = 20;
```

Correct Answer: D
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 78
You work for an international charity organization. You are writing a query to list the highest 100 different amounts that were donated. You have written the following code segment (Line numbers are included for reference only):

```
01     SELECT *
02     FROM  (SELECT Customer.CustomerID, SUM(TotalDue) AS TotalGiven,
03     ..................
04     FROM  Customer
05     JOIN SalesOrder
06     ON Customer.CustomerID = SalesOrder.CustomerID
07     GROUP BY Customer.CustomerID) AS DonationsToFilter
08     WHERE FilterCriteria <= 100
```

You need to insert a Transact-SQL clause in line 03 to complete the query. Which Transact-SQL clause should you insert?

A. RANK() OVER (ORDER BY SUM(TotalDue) DESC) AS FilterCriteria
B. NTILE(100) OVER (ORDER BY SUM(TotalDue) DESC) AS FilterCriteria
C. ROW_NUMBER() OVER (ORDER BY SUM(TotalDue) DESC) AS FilterCriteria
D. DENSE_RANK() OVER (ORDER BY SUM(TotalDue) DESC) AS FilterCriteria

Correct Answer: D
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 79
You have a database server that has four quad-core processors. This database server executes complex queries that are used to generate reports.
You need to force a query to use only one processor core without affecting other queries.
Which option should you use?

A. OPTION (FAST 1)
B. OPTION (MAXDOP 1)
C. OPTION (RECOMPILE)
D. OPTION (MAXRECURSION 1)

Correct Answer: B
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 80
You notice that for a particular set of parameter values the following query sometimes executes quickly and other times executes slowly. You also notice that 90 percent of the rows in the Address table contain the same value for the city.

```
SELECT AddressId, AddressLine1, City, PostalCode
FROM Person.Address
WHERE City = @city_name
AND PostalCode = @postal_code
```

You need to use a query hint that, for the particular set of parameter values, will result in a more consistent query execution time. Which query hint should you use?

A. FAST
B. MAXDOP
C. OPTIMIZE FOR
D. PARAMETERIZATION FORCED

Correct Answer: C
Section: Section 4
Explanation

Explanation/Reference:

QUESTION 81
You have been tasked to write a query to select one million rows.
You need to optimize the query to return the first 50 rows as quickly as possible.
What query hint should you use?

A. FAST 50
B. MAXDOP 50
C. OPTIMIZE FOR @ROWS=50
D. TABLE HINT(table, INDEX(50))

Correct Answer: A
Section: Section 5
Explanation

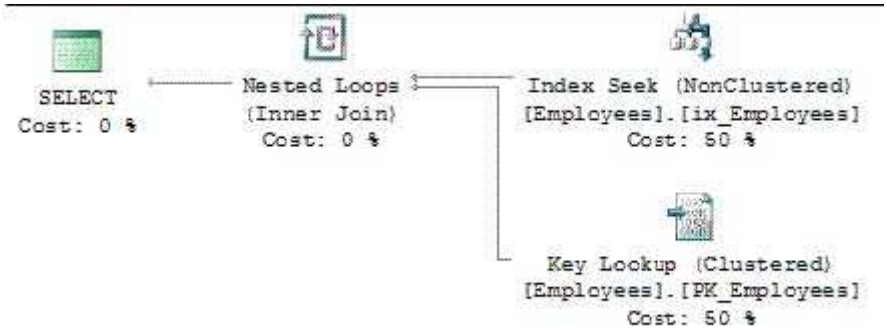
Explanation/Reference:
FAST number_rows
Specifies that the query is optimized for fast retrieval of the first number_rows. This is a nonnegative integer. After the first number_rows are returned, the query continues execution and produces its full result set.

QUESTION 82
You have the following query:

```
SELECT EmployeeID, ManagerID, LoginID FROM dbo.Employees WHERE ManagerID = 1500
ORDER BY ManagerID;
```

You have been tasked to force the query to use the execution plan in the exhibit.
You need to use an appropriate hint to perform the task.
Which hint should you use?

Exhibit:



A. INDEX(0)
B. INDEX(1)
C. INDEX(PK_Employees)
D. INDEX(IX_Employees)

Correct Answer: D

Section: Section 5
Explanation

Explanation/Reference:

QUESTION 83
You are working with a SQL Server 2008 instance that is configured to use the Latin1_General_CS_AS collation. You create a database by using the following statements.

```
CREATE DATABASE TestDB COLLATE Estonian_CS_AS;
GO
USE TestDB;
GO
CREATE TABLE TestPermTab (PrimaryKey int PRIMARY KEY, Col1 nchar );
```

You implement a temporary table named #TestTempTab that uses the following code.

```
use TestDB;
GO
CREATE TABLE #TestTempTab (PrimaryKey int PRIMARY KEY, Col1 nchar );
INSERT INTO #TestTempTab
SELECT * FROM TestPermTab;
```

You need to identify which collation will be assigned to #TestTempTab. Which collation will be assigned?

A. No-collation
B. Estonian_CS_AS
C. Latin1_General_CS_AS
D. The collation selected by the Windows system locale of the server

Correct Answer: C
Section: Section 5
Explanation

Explanation/Reference:
When using temporary tables without specifying a collation (for the column used) SQL Server will inherit the collation for the newly created temporary table from the SQL Server instance default.

You can use the database_default option in the COLLATE clause to specify that a column in a temporary table use the collation default of the current user database for the connection instead of tempdb.

QUESTION 84
You have a table named Person that contains a nvarchar column named Surname. The Person table currently has a clustered index on PersonID. The Surname column contains Russian and Japanese characters.
The following code segment will be used to search by Surname.

```
IF @lang ='Russian'
SELECT PersonID, Surname
FROM Person WHERE Surname = @SearchName COLLATE Cyrillic_General_CI_AS
if @lang = 'Japanese'
SELECT PersonID, Surname FROM Person WHERE Surname = @SearchName COLLATE
Japanese_CI_AS_KS
```

You need to enable SQL Server to perform an index seek for these queries. What should you do?

A. Create an index on the Surname column.
B. Create a computed column for each collation that needs to be searched. Create an index on the Surname column.
C. Create a computed column for each collation that needs to be searched. Create an index on each computed column.
D. Create a new column for each collation that needs to be searched and copy the data from the Surname

column. Create an index on each new column.

Correct Answer: C
Section: Section 5
Explanation

Explanation/Reference:
```
-- Add computed columns with different collations.
ALTER TABLE Person
ADD Surname_RU AS Surname COLLATE Cyrillic_General_CI_AS,
    Surname_JP AS Surname COLLATE Japanese_CI_AS_KS;

-- Create an index on the computed columns.
CREATE NONCLUSTERED INDEX IX_Person_Surname_RU ON Person (Surname_RU);
CREATE NONCLUSTERED INDEX IX_Person_Surname_JP ON Person (Surname_JP);
GO
```

QUESTION 85
You have an application that is used by international clients. All clients connect by using Windows Authentication.
You need to ensure that system and user-defined error messages are displayed in the localized language for the clients. What should you do? (Each correct answer represents part of the solution. Choose two.)

A. Use @@LANGUAGE function
B. Use default language for each login
C. Use @lang parameter of sp_addmessage
D. Use the "set language" option of sp_configure

Correct Answer: BC
Section: Section 5
Explanation

Explanation/Reference:
sp_configure is used to specify the default language for all newly created logins.

CREATE LOGIN expression has DEFAULT_LANGUAGE = language option. It specifies the default language to be assigned to the login. If this option is not included, the default language is set to the current default language of the server.

sp_addmessage stores a new user-defined error message in an instance of the SQL Server Database Engine. One of the options is 'language. It is the language for this message, that is the language in which message is written. When language is omitted, the language is the default language for the session.

QUESTION 86
Your server collation is SQL_Latin1_General_CP1_CI_AS. You have a database named Contoso that has a collation setting of SQL_Scandinavian_Cp850_CI_AS. You create and populate a temporary table #Person from table dbo.Person in Contoso using the following statements:

```
use Contoso;
CREATE TABLE #Person (LastName nchar(128));
INSERT INTO #Person SELECT LastName FROM dbo.Person;
You then run the following command:
SELECT * FROM dbo.Person a JOIN #Person b
ON a.LastName = b.LastName;
```

This command returns the following error:
Cannot resolve the collation conflict between "SQL_Latin1_General_CP1_CI_AS" and "SQL_Scandinavian_Cp850_CI_AS" in the equal to operation.
You need to resolve the collation conflict. Which Transact-SQL statement should you use?

A. CREATE TABLE #Person (LastName nvarchar(128) SPARSE);
B. CREATE TABLE #Person (LastName nvarchar(128) COLLATE database_default);
C. CREATE TABLE #Person (LastName nvarchar(128) COLLATE SQL_Latin1_General_CP1_CI_AS);

D. CREATE TABLE tmpPerson (LastName nvarchar(128) COLLATE SQL_Latin1_General_CP1_CI_AS);

Correct Answer: B
Section: Section 5
Explanation

Explanation/Reference:

QUESTION 87
You have a SQL Server 2008 database. You have not installed a MAPI client. You need to send e-mail from a stored procedure. Which system stored procedure should you use?

A. xp_sendmail
B. xp_startmail
C. sp_send_dbmail
D. sysmail_start_sp

Correct Answer: C
Section: Section 5
Explanation

Explanation/Reference:

QUESTION 88
You are using Database Mail to deliver email notification and are notified that an employee has not been receiving emails.
You need to determine if any email notifications sent by Database Mail have been unsuccessful.
Which object from the msdb database should you use?

A. msdb.dbo.sysmail_event_log
B. msdb.dbo.sysmail_sentitems
C. msdb.dbo.sysmail_unsentitems
D. msdb.dbo.sysmail_faileditems

Correct Answer: D
Section: Section 5
Explanation

Explanation/Reference:
sysmail_faileditems
Contains one row for each Database Mail message with the failed status. Use this view to determine which messages were not successfully sent.

QUESTION 89
You have been tasked to delete a number of Database Mail messages that have been sent.
You need to delete all the emails that were sent more than one month ago.
Which Transact-SQL statements should you run?

A. DECLARE @OneMonthAgo datetime = DATEADD(mm,-1,GETDATE())
   EXEC msdb.dbo.sysmail_delete_log_sp @OneMonthAgo
B. DECLARE @OneMonthAgo datetime = DATEADD(mm,-1,GETDATE())
   EXEC msdb.dbo.sysmail_delete_mailitems_sp @OneMonthAgo
C. DECLARE @OneMonthAgo datetime = DATEADD(mm,-1,GETDATE())
   EXEC msdb.dbo.sysmail_delete_log_sp @OneMonthAgo,'Success'
D. DECLARE @OneMonthAgo datetime = DATEADD(mm,-1,GETDATE())
   EXEC msdb.dbo.sysmail_delete_mailitems_sp @OneMonthAgo,'Sent'

Correct Answer: D

Section: Section 5
Explanation

Explanation/Reference:
sysmail_delete_mailitems_sp [[@sent_before =] 'sent_before']
[, [@sent_status =] 'sent_status']
Permanently deletes e-mail messages from the Database Mail internal tables.

[@sent_before=] 'sent_before'
Deletes e-mails up to the date and time provided as the sent_before argument. sent_before is datetime with NULL as default. NULL indicates all dates.

[@sent_status=] 'sent_status'
Deletes e-mails of the type specified by sent_status. sent_status is varchar(8) with no default. Valid entries are sent, unsent, retrying, and failed. NULL indicates all statuses.

Database Mail messages and their attachments are stored in the msdb database. Messages should be periodically deleted to prevent msdb from growing larger than expected and to comply with your organizations document retention program. Use the sysmail_delete_mailitems_sp stored procedure to permanently delete e-mail messages from the Database Mail tables. An optional argument allows you to delete only older e-mails by providing a date and time. E-mails older than that argument will be deleted. Another optional argument allows you to delete only e-mails of a certain type, specified as the sent_status argument. You must provide an argument either for @sent_before or @sent_status. To delete all messages, use @sent_before = getdate().

QUESTION 90
You have a table named Books that has columns named BookTitle and Description. There is a full-text index on these columns. You need to return rows from the table in which the word 'computer' exists in either column. Which code segment should you use?

A. SELECT * FROM Books
   WHERE FREETEXT(*,'computer')
B. SELECT * FROM Books
   WHERE BookTitle LIKE '%computer%'
C. SELECT * FROM Books
   WHERE BookTitle = '%computer%'
   OR Description = '%computer%'
D. SELECT * FROM Books
   WHERE FREETEXT(BookTitle,'computer')

Correct Answer: A
Section: Section 5
Explanation

Explanation/Reference:

QUESTION 91
You need to configure Full-Text Search to ignore specific words. Which Full-Text Search component should you use?

A. iFilter
B. Stoplist
C. Thesaurus file
D. Word breakers

Correct Answer: B
Section: Section 5
Explanation

Explanation/Reference:

QUESTION 92
Your company manufactures and distributes bicycle parts. You have a full-text catalog on the Inventory table which contains the PartName and Description columns. You also use a full-text thesaurus to expand common bicycle terms. You need to write a full-text query that will not only match the exact word in the search, but also the meaning.
Which Transact-SQL statement should you use?

A. SELECT * FROM Inventory
   WHERE FREETEXT (*, 'cycle'))
B. SELECT * FROM Inventory
   WHERE CONTAINS (*, 'cycle')
C. SELECT * FROM Inventory
   WHERE Description LIKE '%cycle%'
D. SELECT * FROM Inventory
   WHERE CONTAINS (*, 'FormsOf(Inflectional, cycle)')

Correct Answer: A
Section: Section 5
Explanation

Explanation/Reference:

QUESTION 93
Your company manufactures and distributes bowling balls. You have a full-text catalog named ftCatalog which contains the ftInventory index on the Products table. Your marketing department has just inserted a new bowling ball into the Inventory table. You notice only the new bowling ball is not being included in the results of the full-text searches. You have confirmed that the row exists in the Products table. You need to update the full-text catalog in the least amount of time. Which Transact-SQL statement should you use?

A. ALTER FULLTEXT INDEX ON ftInventory START FULL POPULATION
B. ALTER FULLTEXT INDEX ON ftInventory RESUME POPULATION
C. ALTER FULLTEXT INDEX ON ftInventory START UPDATE POPULATION
D. ALTER FULLTEXT CATALOG ftCatalog REBUILD

Correct Answer: C
Section: Section 5
Explanation

Explanation/Reference:

QUESTION 94
You have a server named Contoso with multiple databases.
You have been tasked to write a PowerShell script to determine which databases on the server are larger than 100GB.
You open PowerShell from SQL Server Management Studio. You create two variables as follows:

```
PS SQLSERVER:\SQL\Contoso> $MultipleOfGB = 1024 * 1024
PS SQLSERVER:\SQL\Contoso> $Server = Get-Item
```

You need to determine which script will produce the desired list of databases.
What script should you use?

A. $Server.Databases | Where-Object{($_.Size * $MultipleOfGB) -gt 100GB\} | Select-Object Name, Size
B. $Server | Where-Object{($_.DatabaseSize * $MultipleOfGB) -match 100GB\} | Select-Object Name, DatabaseSize
C. $Server | Where-Object{($_.DatabaseSize * $MultipleOfGB) -gt 100GB\} | Select-Object Name, DatabaseSize
D. $Server.Databases | Where-Object{($_.Size * $MultipleOfGB) -match 100GB\} | Select-Object Name,

Size

Correct Answer: A
Section: Section 5
Explanation

Explanation/Reference:

QUESTION 95
You have a table named Inventory. You open a Microsoft Windows PowerShell session at the following location by using the SQL Server Windows PowerShell provider. PS

```
SQLSERVER:\SQL\CONTOSO\DEFAULT\Databases\ReportServer\Tables\dbo.Inventory
\Columns>
```

Using the SQL Server Windows PowerShell provider, you need to query all the columns in the table. Which cmdlet should you use?

A. Get-Item
B. Get-Location
C. Get-ChildItem
D. Get-ItemProperty

Correct Answer: C
Section: Section 5
Explanation

Explanation/Reference:

QUESTION 96
You are configuring Service Broker to process messages within a single database. You have performed the following steps.

CREATE MESSAGE TYPE
CREATE CONTRACT
CREATE QUEUE

You need to complete the Service Broker configuration. What should be the next step?

A. CREATE ROUTE
B. CREATE SERVICE
C. CREATE ENDPOINT
D. CREATE BROKER PRIORITY

Correct Answer: B
Section: Section 5
Explanation

Explanation/Reference:

QUESTION 97
You have a database named Contoso. The Contoso database has a Service Broker queue named VacationRequestQueue.
The Contoso database has been restored to a new server. Since restoring the database, Service Broker is no longer able to send new messages.
You need to configure Service Broker in order to resolve the issue.
Which Transact-SQL statement should you use?

A. ALTER DATABASE Contoso SET NEW_BROKER;
B. ALTER DATABASE Contoso SET ENABLE_BROKER;
C. ALTER QUEUE VacationRequestQueue WITH STATUS = ON;
D. ALTER QUEUE VacationRequestQueue WITH ACTIVATION (STATUS = ON);

Correct Answer: A
Section: Section 5
Explanation

Explanation/Reference:

QUESTION 98
You created a Service Broker queue by using the following Transact-SQL statement:

```
CREATE QUEUE VacationRequestQueue WITH RETENTION = OFF, ACTIVATION (
PROCEDURE_NAME = dbo.VacationRequestProcess,
MAX_QUEUE_READERS = 5, EXECUTE AS SELF
);
```

You need to modify the Service Broker queue to prevent it from processing received messages.
The queue should continue to receive messages.
Which Transact-SQL statement should you use?

A. ALTER QUEUE VacationRequestQueue WITH RETENTION = ON;
B. ALTER QUEUE VacationRequestQueue WITH STATUS = OFF;
C. ALTER QUEUE VacationRequestQueue WITH ACTIVATION (STATUS = OFF);
D. ALTER QUEUE VacationRequestQueue WITH ACTIVATION (EXECUTE AS OWNER);

Correct Answer: C
Section: Section 5
Explanation

Explanation/Reference:
ALTER QUEUE VacationRequestQueue WITH RETENTION = ON; sets the VacationRequestQueue queue to retain messages. The queue retains all messages sent to or from services that use this queue until the conversation that contains the message ends.

ALTER QUEUE VacationRequestQueue WITH STATUS = OFF; makes the VacationRequestQueue queue unavailable to receive messages.

ALTER QUEUE VacationRequestQueue WITH ACTIVATION (STATUS = OFF); the queue does not activate the stored procedure.

ALTER QUEUE VacationRequestQueue WITH ACTIVATION (EXECUTE AS OWNER); specifies that the stored procedure executes as the owner of the queue.

QUESTION 99
You use the same Service Broker configuration to support a Web site and an internal application. The Web site generates a greater workload than the internal application.
You need to configure Service Broker to ensure that messages sent by the internal application are processed before those sent by the Web site.
Which Transact-SQL statement should you use?

A. ALTER SERVICE
B. CREATE CONTRACT
C. CREATE BROKER PRIORITY
D. ALTER QUEUE WITH ACTIVATION

Correct Answer: C
Section: Section 5

Explanation

Explanation/Reference:

QUESTION 100
You are using Microsoft SQL Server 2008 Enterprise Edition. You need to maintain a history of all data modifications made to a table, including the type of modification and the values modified. Which tracking method should you use?

A. Database Audit
B. Change Tracking
C. C2 Audit Tracing
D. Change Data Capture

Correct Answer: D
Section: Section 5
Explanation

Explanation/Reference:
Database Audit
Auditing an instance of the SQL Server Database Engine or an individual database involves tracking and logging events that occur on the Database Engine. SQL Server audit lets you create server audits, which can contain server audit specifications for server level events, and database audit specifications for database level events. Audited events can be written to the event logs or to audit files.

Change Data Capture
Change data capture provides historical change information for a user table by capturing both the fact that DML changes were made and the actual data that was changed. Changes are captured by using an asynchronous process that reads the transaction log and has a low impact on the system.

Change Tracking
Change tracking captures the fact that rows in a table were changed, but does not capture the data that was changed. This enables applications to determine the rows that have changed with the latest row data being obtained directly from the user tables. Therefore, change tracking is more limited in the historical questions it can answer compared to change data capture. However, for those applications that do not require the historical information, there is far less storage overhead because of the changed data not being captured.

QUESTION 101
A database contains tables named Sales and SalesArchive. SalesArchive contains historical sales data. You configure Change Tracking on the Sales table. The minimum valid version of the Sales table is

You need to write a query to export only sales data that changed since version 10, including the primary key of deleted rows. Which method should you use?

A. FROM Sales RIGHT JOIN CHANGETABLE (CHANGES Sales, 10) AS C ...
B. FROM Sales INNER JOIN CHANGETABLE (CHANGES Sales, 10) AS C ...
C. FROM Sales INNER JOIN CHANGETABLE (CHANGES SalesArchive, 10) AS C ...
D. FROM Sales RIGHT JOIN CHANGETABLE (CHANGES SalesArchive, 10) AS C ...

Correct Answer: A
Section: Section 6
Explanation

Explanation/Reference:

QUESTION 102
You are required to modify a table named Sales.SalesOrder. The table has change tracking enabled on it. You need to disable change tracking prior to modifying the Sales.SalesOrder table.
Which Transact-SQL statement should you use?

A. EXEC sys.sp_cdc_disable_db
B. ALTER DATABASE Contoso
SET CHANGE_TRACKING = OFF
C. ALTER TABLE Sales.SalesOrder
DISABLE CHANGE_TRACKING
D. EXEC sys.sp_cdc_disable_table
@source_schema = N'Sales',
@source_name = N'SalesOrder',
@capture_instance = N'Sales_SalesOrder'

Correct Answer: C
Section: Section 6
Explanation

Explanation/Reference:
Enabling Change Tracking for a Database
Before you can use change tracking, you must enable change tracking at the database level.
ALTER DATABASE AdventureWorks2008R2
SET CHANGE_TRACKING = ON
(CHANGE_RETENTION = 2 DAYS, AUTO_CLEANUP = ON);

Enabling Change Tracking for a Table
Change tracking must be enabled for each table that you want tracked. When change tracking is enabled, change tracking information is maintained for all rows in the table that are affected by a DML operation.
ALTER TABLE Person.Person
ENABLE CHANGE_TRACKING
WITH (TRACK_COLUMNS_UPDATED = ON);

Disabling Change Tracking
Change tracking must first be disabled for all change-tracked tables before change tracking can be set to OFF for the database. To determine the tables that have change tracking enabled for a database, use the sys.change_tracking_tables catalog view.
ALTER TABLE Person.Person
DISABLE CHANGE_TRACKING;

When no tables in a database track changes, you can disable change tracking for the database.
ALTER DATABASE AdventureWorks2008R2
SET CHANGE_TRACKING = OFF;

QUESTION 103
You have implemented change tracking on a table named Sales.SalesOrder.
You need to determine all columns that have changed since the minimum valid version.

Which function should you use?

A. CHANGE_TRACKING_CURRENT_VERSION
B. CHANGE_TRACKING_IS_COLUMN_IN_MASK
C. CHANGETABLE with the CHANGES argument
D. CHANGETABLE with the VERSION argument

Correct Answer: C
Section: Section 6
Explanation

Explanation/Reference:
CHANGETABLE (
{ CHANGES table , last_sync_version
| VERSION table , <primary_key_values> })
[AS] table_alias [(column_alias [,...n])

CHANGES table , last_sync_version

Returns tracking information for all changes to a table that have occurred since the version that is specified by last_sync_version.

VERSION table, { <primary_key_values> }
Returns the latest change tracking information for a specified row. Primary key values must identify the row. <primary_key_values> identifies the primary key columns and specifies the values.

QUESTION 104
You have two tables named Customers and Orders. They are related by a foreign key constraint on the CustomerID on each table. You need to generate the following XML structure that includes all customers and their related orders.

```
<Root>
    <Customer>
        <CustomerName>Customer1</CustomerName>
            <Orders>
                <Order>
                    <OrderDate>1/1/2008</OrderDate>
                    <OrderValue>422</OrderValue>
                </Order>
                <Order>
                    <OrderDate>4/8/2008</OrderDate>
                    <OrderValue>300</OrderValue>
                </Order>
                ...
            </Orders>
            ...
    </Customer>
<Root>
```

Which query should you use?

A. SELECT CustomerName, OrderDate, OrderValue
FROM Customers c JOIN Orders o ON o.CustomerID = c.CustomerID
FOR XML AUTO, TYPE

B. SELECT * FROM (
SELECT CustomerName, NULL AS OrderDate, NULL AS OrderValue
FROM Customers
UNION ALL
SELECT NULL, OrderDate, OrderValue FROM Orders) CustomerOrders
FOR XML AUTO, ROOT('Root')

C. SELECT CustomerName, (
SELECT OrderDate, OrderValue
FROM Orders
FOR XML PATH('Order'))
FROM Customers FOR XML PATH('Customer'), ROOT('Root'), TYPE

D. SELECT CustomerName, (
SELECT OrderDate, OrderValue
FROM Orders
WHERE Orders.CustomerId = Customers.CustomerId FOR XML PATH('Order'), TYPE) Orders
FROM Customers FOR XML PATH('Customer'), ROOT('Root')

Correct Answer: D
Section: Section 6
Explanation

Explanation/Reference:

QUESTION 105
You need to generate the following XML document.

```
<ProductExport>
    <Product Price="99">Product1</Product>
    <Product Price="199">Product2</Product>
```

```
    <Product Price="299">Product3</Product>
    <Product Price="399">Product4</Product>
</ProductExport>
```

Which query should you use?

A. SELECT Price, ProductName
   FROM Products AS ProductExport
   FOR XML PATH('Product')
B. SELECT Price, ProductName
   FROM Products
   FOR XML AUTO, ROOT('ProductExport')
C. SELECT Price [@Price],
   ProductName AS [*] FROM Products AS ProductExport FOR XML AUTO, ELEMENTS
D. SELECT Price [@Price],
   ProductName AS [*] FROM Products FOR XML PATH('Product'),ROOT('ProductExport')

Correct Answer: D
Section: Section 6
Explanation

Explanation/Reference:

QUESTION 106
Your company's database contains Customers and Orders tables.
You have been tasked to write a SELECT statement that outputs customer and order data as a valid and well-formed XML document. You are required to mix attribute and element based XML within the document.
You have determined that using the FOR XML AUTO clause will not be suitable.
You need to identify the correct FOR XML clause to meet the requirement.
Which FOR XML statement should you use? (Each correct answer represents a complete solution. Choose two.)

A. FOR BROWSE
B. FOR XML RAW
C. FOR XML PATH
D. FOR XML EXPLICIT

Correct Answer: CD
Section: Section 6
Explanation

Explanation/Reference:

QUESTION 107
Your company's database contains Customers and Orders tables.
You have been tasked to write a SELECT statement that exposes the data as a valid and well-formed XML document. The XML data must be attribute-based, and the order data XML must be nested in the customer data XML.
You need to write a SELECT statement to meet the requirements.
Which Transact-SQL statement should you use?

A. SELECT c.ContactName, o.OrderDate, o.RequiredDate
   FROM Customers c INNER JOIN Orders o
        ON c.CustomerID = o.CustomerID
   FOR XML RAW('Contact'), ROOT('ContactOrderDate')
B. SELECT c.ContactName, o.OrderDate, o.RequiredDate
   FROM Customers c INNER JOIN Orders o
        ON c.CustomerID = o.CustomerID
   FOR XML PATH('ContactOrderDate')

C. SELECT c.ContactName, o.OrderDate, o.RequiredDate
FROM Customers c INNER JOIN Orders o
ON c.CustomerID = o.CustomerID
FOR XML AUTO

D. SELECT c.ContactName, o.OrderDate, o.RequiredDate
FROM Customers c INNER JOIN Orders o
ON c.CustomerID = o.CustomerID
FOR XML AUTO, ROOT('ContactOrderDate')

Correct Answer: D
Section: Section 6
Explanation

Explanation/Reference:
SELECT c.ContactName, o.OrderDate, o.RequiredDate
FROM Customers c INNER JOIN Orders o
ON c.CustomerID = o.CustomerID
FOR XML RAW('Contact'), ROOT('ContactOrderDate')

Produce the following result:

```
<ContactOrderDate>
  <Contact ContactName="Paul Henriot" OrderDate="1996-07-04T00:00:00"
RequiredDate="1996-08-01T00:00:00" />
  <Contact ContactName="Karin Josephs" OrderDate="1996-07-05T00:00:00"
RequiredDate="1996-08-16T00:00:00" />
...
  <Contact ContactName="Paula Wilson" OrderDate="1998-05-06T00:00:00"
RequiredDate="1998-06-03T00:00:00" />
</ContactOrderDate>
```

SELECT c.ContactName, o.OrderDate, o.RequiredDate
FROM Customers c INNER JOIN Orders o
ON c.CustomerID = o.CustomerID
FOR XML PATH('ContactOrderDate')

Produce the following result:

```
<ContactOrderDate>
  <ContactName>Paul Henriot</ContactName>
  <OrderDate>1996-07-04T00:00:00</OrderDate>
  <RequiredDate>1996-08-01T00:00:00</RequiredDate>
</ContactOrderDate>
<ContactOrderDate>
  <ContactName>Karin Josephs</ContactName>
  <OrderDate>1996-07-05T00:00:00</OrderDate>
  <RequiredDate>1996-08-16T00:00:00</RequiredDate>
</ContactOrderDate>
...
<ContactOrderDate>
  <ContactName>Paula Wilson</ContactName>
  <OrderDate>1998-05-06T00:00:00</OrderDate>
  <RequiredDate>1998-06-03T00:00:00</RequiredDate>
</ContactOrderDate>
```

SELECT c.ContactName, o.OrderDate, o.RequiredDate
FROM Customers c INNER JOIN Orders o
ON c.CustomerID = o.CustomerID
FOR XML AUTO

Produce the following result:

```
<c ContactName="Paul Henriot">
  <o OrderDate="1996-07-04T00:00:00" RequiredDate="1996-08-01T00:00:00" />
</c>
<c ContactName="Karin Josephs">
  <o OrderDate="1996-07-05T00:00:00" RequiredDate="1996-08-16T00:00:00" />
</c>
...
```

```
<c ContactName="Paula Wilson">
  <o OrderDate="1998-05-06T00:00:00" RequiredDate="1998-06-03T00:00:00" />
</c>
```

```
SELECT c.ContactName, o.OrderDate, o.RequiredDate
FROM Customers c INNER JOIN Orders o
     ON c.CustomerID = o.CustomerID
FOR XML AUTO, ROOT('ContactOrderDate')
```

Produce the following result:

```
<ContactOrderDate>
  <c ContactName="Paul Henriot">
    <o OrderDate="1996-07-04T00:00:00" RequiredDate="1996-08-01T00:00:00" />
  </c>
  <c ContactName="Karin Josephs">
    <o OrderDate="1996-07-05T00:00:00" RequiredDate="1996-08-16T00:00:00" />
  </c>
...
  <c ContactName="Paula Wilson">
    <o OrderDate="1998-05-06T00:00:00" RequiredDate="1998-06-03T00:00:00" />
  </c>
</ContactOrderDate>
```

QUESTION 108
You have a table named Customer that has an XML column named Locations. This column stores an XML fragment that contains details of one or more locations, as show in the following examples.

```
<Location City="Sydney" Address="..." PhoneNumber="..." />
<Location City="Chicago" Address="..." PhoneNumber="..." />
<Location City="London" Address="..." PhoneNumber="..." />
```

You need to write a query that returns a row for each of the customer's locations. Each resulting row must include the customer name, city, and an XML fragment that contains the location details.
Which query should you use?

A. SELECT CustomerName, Locations.query('for $i in /Location return data($i/@City)'), Locations.query ('for $i in /Location return $i')
   FROM Customer
B. SELECT CustomerName, Locations.query('for $i in /Location return element Location {$i/@City, $i}')
   FROM Customer
C. SELECT CustomerName, Locations.query('data(/Location/@City)'), Locations.query('/Location') FROM Customer
D. SELECT CustomerName, Loc.value('@City','varchar(100)'), Loc.query('.')
   FROM Customer CROSS APPLY Customer.Locations.nodes ('/Location') Locs(Loc)

Correct Answer: D
Section: Section 6
Explanation

Explanation/Reference:

QUESTION 109
Click the Exhibit button.

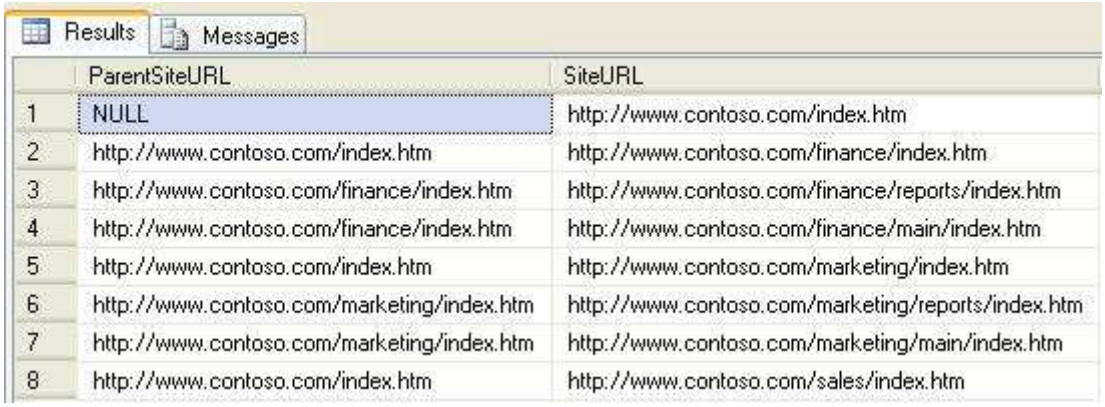
You have the following XML:

```
<Site URL="http://www.contoso.com/index.htm">
    <Site URL="http://www.contoso.com/finance/index.htm">
        <Site URL="http://www.contoso.com/finance/reports/index.htm" />
        <Site URL="http://www.contoso.com/finance/main/index.htm" />
    </Site>
    <Site URL="http://www.contoso.com/marketing/index.htm">
        <Site URL="http://www.contoso.com/marketing/reports/index.htm" />
        <Site URL="http://www.contoso.com/marketing/main/index.htm" />
    </Site>
```

```
    <Site URL="http://www.contoso.com/sales/index.htm" />
</Site>
```

You are tasked to query the sites listed in the XML by using OPENXML.
The results will have two columns, ParentSiteURL and SiteURL.
The ParentSiteURL column should contain the URL attribute of the parent site.
The SiteURL column should contain the URL attribute of the site itself.
The output should look like that in the exhibit.
You need to write the OPENXML query.
Which Transact-SQL statement should you use?

Exhibit:



Results | Messages

	ParentSiteURL	SiteURL
1	NULL	http://www.contoso.com/index.htm
2	http://www.contoso.com/index.htm	http://www.contoso.com/finance/index.htm
3	http://www.contoso.com/finance/index.htm	http://www.contoso.com/finance/reports/index.htm
4	http://www.contoso.com/finance/index.htm	http://www.contoso.com/finance/main/index.htm
5	http://www.contoso.com/index.htm	http://www.contoso.com/marketing/index.htm
6	http://www.contoso.com/marketing/index.htm	http://www.contoso.com/marketing/reports/index.htm
7	http://www.contoso.com/marketing/index.htm	http://www.contoso.com/marketing/main/index.htm
8	http://www.contoso.com/index.htm	http://www.contoso.com/sales/index.htm

A. SELECT ParentSiteURL, SiteURL
FROM OPENXML (@XMLDocHandle, '//@Site', 1)
WITH (ParentSiteURL nVarChar(512) '../URL',
SiteURL nVarChar(512) 'URL')

B. SELECT ParentSiteURL, SiteURL
FROM OPENXML (@XMLDocHandle, '//URL', 1)
WITH (ParentSiteURL nVarChar(512) '../@URL',
SiteURL nVarChar(512) '@URL')

C. SELECT ParentSiteURL, SiteURL
FROM OPENXML (@XMLDocHandle, '//Site', 1)
WITH (ParentSiteURL nVarChar(512) '../@URL',
SiteURL nVarChar(512) '@URL')

D. SELECT ParentSiteURL, SiteURL
FROM OPENXML (@XMLDocHandle, '//@URL', 1)
WITH (ParentSiteURL nVarChar(512) '../URL', SiteURL nVarChar(512) 'URL')

Correct Answer: C
Section: Section 6
Explanation

Explanation/Reference:

```
DECLARE @XMLDocHandle int,
        @XMLDoc varchar(1000) ='
<Site URL="http://www.contoso.com/index.htm">
    <Site URL="http://www.contoso.com/finance/index.htm">
        <Site URL="http://www.contoso.com/finance/reports/index.htm" />
        <Site URL="http://www.contoso.com/finance/main/index.htm" />
    </Site>
    <Site URL="http://www.contoso.com/marketing/index.htm">
        <Site URL="http://www.contoso.com/marketing/reports/index.htm" />
        <Site URL="http://www.contoso.com/marketing/main/index.htm" />
    </Site>
    <Site URL="http://www.contoso.com/sales/index.htm" />
</Site>';

--Create an internal representation of the XML document.
EXEC sp_xml_preparedocument @XMLDocHandle OUTPUT, @XMLDoc
```

```
SELECT ParentSiteURL, SiteURL
FROM OPENXML (@XMLDocHandle, '//Site', 1)
WITH ( ParentSiteURL nVarChar(512) '../@URL',
SiteURL nVarChar(512) '@URL')
```

QUESTION 110
Your company uses an application that passes XML to the database server by using stored procedures. The database server has a large number of XML handles that are currently active. You determine that the XML is not being flushed from SQL Server memory.
You need to identify the system stored procedure to flush the XML from memory.
Which Transact-SQL statement should you use?

A. sp_xml_removedocument
B. sp_xml_preparedocument
C. sp_reserve_http_namespace
D. sp_delete_http_namespace_reservation

Correct Answer: A
Section: Section 6
Explanation

Explanation/Reference:
sp_xml_removedocument removes the internal representation of the XML document specified by the document handle and invalidates the document handle.

sp_xml_preparedocument reads the XML text provided as input, parses the text by using the MSXML parser (Msxmlsql.dll), and provides the parsed document in a state ready for consumption. This parsed document is a tree representation of the various nodes in the XML document: elements, attributes, text, comments, and so on. A parsed document is stored in the internal cache of SQL Server. The MSXML parser uses one-eighth the total memory available for SQL Server. To avoid running out of memory, run sp_xml_removedocument to free up the memory.

QUESTION 111
You work for a company that provides marketing data to other companies.
You have the following Transact-SQL statement:

```
DECLARE @CustomerDemographics XML SET @CustomerDemographics=N'
<CustomerDemographics>
    <Customer CustomerID="1" Age="21" Education="High School">
        <IsCoffeeDrinker>0</IsCoffeeDrinker>
    </Customer>
    <Customer CustomerID="2" Age="27" Education="College">
        <IsCoffeeDrinker>1</IsCoffeeDrinker>
        <IsFriendly>1</IsFriendly>
    </Customer>
    <Customer CustomerID="3" Age="35" Education="Unknown">
        <IsCoffeeDrinker>1</IsCoffeeDrinker>
        <IsFriendly>1</IsFriendly>
    </Customer>
</CustomerDemographics>'

DECLARE @OutputAgeOfCoffeeDrinkers XML
SET @OutputAgeOfCoffeeDrinkers = @CustomerDemographics.query('
for $output in /child::CustomerDemographics/child::Customer[( child::
IsCoffeeDrinker[1] cast as xs:boolean )]
return <CoffeeDrinkingCustomer> { $output/attribute::Age \} </
CoffeeDrinkingCustomer>')

SELECT @OutputAgeOfCoffeeDrinkers
```

You need to determine the result of the query. What result should you expect?

A. <CoffeeDrinkingCustomer Age="27" />

```
    <CoffeeDrinkingCustomer Age="35" />
```
B.
```
<CoffeeDrinkingCustomer Age="21" />
```
C.
```
<CustomerDemographics>
   <Customer>
      <CoffeeDrinkingCustomer Age="21" />
   </Customer>
</CustomerDemographics>
```
D.
```
<CustomerDemographics>
   <Customer>
      <CoffeeDrinkingCustomer Age="27" />
   </Customer>
   <Customer>
      <CoffeeDrinkingCustomer Age="35" />
   </Customer>
</CustomerDemographics>
```

Correct Answer: A
Section: Section 6
Explanation

Explanation/Reference:

QUESTION 112
You have a table named Stores that has an XML column named OpenHours.
This column contains the opening and closing times.
<hours dayofWeek= "Monday" open ="8:00 AM" closed="8:00 PM"
<hours dayofWeek= "Tuesday" open ="8:00 AM" closed="8:00 PM"
...
<hours dayofWeek= "Saturday" open ="8:00 AM" closed="8:00 PM"

You need to write a query that returns a list of stores and their opening time for a specified day.
Which code segment should you use?

A.
```
DECLARE @Day VARCHAR(10) = 'Tuesday'
SELECT StoreName, OpenHours.value('/hours[1]/@open','time')
FROM Stores WHERE OpenHours.value('/hours[1]/@dayofWeek','varchar(20)') = @Day
```
B.
```
DECLARE @Day VARCHAR(10) = 'Tuesday'
SELECT StoreName, OpenHours.value('/hours[1]/@open','time')
FROM Stores WHERE OpenHours.exist('/hours[@dayofWeek=sql:variable("@Day")]') = 1
```
C.
```
DECLARE @Day VARCHAR(10) = 'Tuesday'
SELECT Storename, OpenHours.query('data(/hours[@dayofWeek=sql:variable("@Day")]/@open)')
FROM Stores
```
D.
```
DECLARE @Day VARCHAR(10) = 'Tuesday'
SELECT StoreName, OpenHours.value('/hours[1][@dayofWeek=sql:variable("@Day")]/@open','time')
FROM Stores
```

Correct Answer: C
Section: Section 6
Explanation

Explanation/Reference:
```
CREATE TABLE Stores(
    StoreName VARCHAR(10)NOT NULL,
    OpenHours [xml] NULL,
    CONSTRAINT [PK_Stores] PRIMARY KEY CLUSTERED (StoreName))
GO

INSERT INTO Stores (StoreName, OpenHours)
VALUES
(
'Store1',
'<hours dayofWeek= "Wednesday" open ="8:00 AM" closed="8:00 PM"/>
```

```
<hours dayofWeek= "Tuesday" open ="9:00 AM" closed="8:00 PM"/>
<hours dayofWeek= "Friday" open ="8:00 AM" closed="8:00 PM"/>'),
('Store2',
'<hours dayofWeek= "Monday" open ="8:00 AM" closed="8:00 PM"/>
<hours dayofWeek= "Tuesday" open ="8:00 AM" closed="8:00 PM"/>
<hours dayofWeek= "Saturday" open ="8:00 AM" closed="8:00 PM"/>')

DECLARE @Day VARCHAR(10) = 'Tuesday'
SELECT Storename, OpenHours.query('data(/hours[@dayofWeek=sql:variable
("@Day")]/@open)')
FROM Stores
GO
```

QUESTION 113
You have the following XML document that contains Product information.

```
DECLARE @prodList xml ='
<ProductList xmlns="urn:Wide_World_Importers/schemas/Products">

<Product Name="Product1" Category="Food" Price="12.3" />
<Product Name="Product2" Category="Drink" Price="1.2" />
<Product Name="Product3" Category="Food" Price="5.1" />
...

</ProductList>';
```

You need to return a list of products that contains the Product Name, Category, and Price of each product.
Which query should you use?

A. SELECT prod.value('.[1]/@Name','varchar(100)'), prod.value('.[1]/@Category','varchar(20)'), prod.value ('.[1]/@Price','money')
FROM @prodList.nodes('/ProductList/Product') ProdList(prod);
B. SELECT prod.value('@Name','varchar(100)'), prod.value('@Category','varchar(20)'), prod.value ('@Price','money')
FROM @prodList.nodes('/ProductList/Product') ProdList(prod);
C. WITH XMLNAMESPACES(DEFAULT 'urn;Wide_World_Importers/schemas/Products' as o)
SELECT prod.value('Name[1]','varchar(100)'), prod.value('Category[1]','varchar(20)'), prod.value('Price [1]','money')
FROM @prodList.nodes('/o:ProductList/o:Product') ProdList(prod);
D. WITH XMLNAMESPACES(DEFAULT 'urn:Wide_World_Importers/schemas/Products')
SELECT prod.value('./@Name','varchar(100)'), prod.value('./@Category','varchar(20)'), prod.value('./ @Price','money')
FROM @prodList.nodes('/ProductList/Product') ProdList(prod);

Correct Answer: D
Section: Section 6
Explanation

Explanation/Reference:

QUESTION 114
You have a table named Products.Product. The table has columns ProductID, Name, Size, and Category.
You have a variable named @XML with following XML value:

```
<Root>
<Category Name="Socks" />
<Category Name="Pants" />
<Category Name="Shirts" />

</Root>
```

You are tasked to write a query that lists the products in Products.Product that match the categories listed in the XML document. You need to write a query to accomplish the task. Which query should you write?

A. SELECT p.ProductID, p.Name, p.Size, p.Category

FROM Production.Product p CROSS APPLY @XML.nodes('//Category') as x(s)

B. SELECT p.ProductID, p.Name, p.Size, p.Category
FROM Production.Product p OUTER APPLY @XML.nodes('//Category') as x(s)

C. WITH XMLTable AS (
SELECT s.value('@Name','varchar(20)') as Category FROM @XML.nodes('//Category') as x(s))

SELECT p.ProductID, p.Name, p.Size, p.Category FROM Production.Product p
INNER JOIN XMLTable x ON p.Category = x.Category

D. WITH XMLTable AS (
SELECT s.value('@Category','varchar(20)') as Category FROM @XML.nodes('//Category') as x(s))

SELECT p.ProductID, p.Name, p.Size, p.Category FROM Production.Product p INNER JOIN XMLTable x ON p.Category = x.Category

Correct Answer: C
Section: Section 6
Explanation

Explanation/Reference:

QUESTION 115
Your company exchanges information with other companies by using XML and Web services. Your manager asks you to remove a schema collection that is no longer used. Before dropping the schema, you should confirm that it is no longer in use.
You need to use a catalog view to determine if the schema collection is being used. Which catalog view should you use?

A. sys.xml_schema_components
B. sys.xml_schema_namespaces
C. sys.xml_schema_collections
D. sys.column_xml_schema_collection_usages

Correct Answer: D
Section: Section 6
Explanation

Explanation/Reference:
sys.column_xml_schema_collection_usages returns a row for each column that is validated by an XML schema.

QUESTION 116
You have an XML schema that you must use to validate XML data in your database. You need to store this XML schema. Which code segment should you use?

A. CREATE SCHEMA CustomerSchema
B. CREATE DEFAULT CustomerSchema AS 'XML'
C. CREATE PRIMARY XML INDEX CustomerSchema
D. CREATE XML SCHEMA COLLECTION CustomerSchema

Correct Answer: D
Section: Section 6
Explanation

Explanation/Reference:

QUESTION 117
You have a table named Customers that has an XML column named CustomerData. There are currently no indexes on the table.
You use the following WHERE clause in a query:

```
WHERE CustomerData.exist ('/CustomerDemographic/@Age[.>="21"]') = 1
```

You need to create indexes for the query.
Which Transact-SQL statements should you use?

A. CREATE CLUSTERED INDEX CL_IDX_Customer ON Customers(CustomerID);
   CREATE PRIMARY XML INDEX PXML_IDX_Customer ON Customers(CustomerData);
   CREATE XML INDEX SXML_IDX_Customer ON Customer(CustomerData)
   USING XML INDEX PXML_IDX_Customer FOR PATH;
B. CREATE PRIMARY XML INDEX PXML_IDX_Customer ON Customers(CustomerData);
   CREATE XML INDEX SXML_IDX_Customer ON Customer(CustomerData)
   USING XML INDEX PXML_IDX_Customer FOR VALUE;
C. CREATE PRIMARY XML INDEX PXML_IDX_Customer ON Customers(CustomerData);
   CREATE XML INDEX SXML_IDX_Customer ON Customer(CustomerData)
   USING XML INDEX PXML_IDX_Customer FOR PATH;
D. CREATE CLUSTERED INDEX CL_IDX_Customer ON Customers(CustomerID);
   CREATE PRIMARY XML INDEX PXML_IDX_Customer ON Customers(CustomerData);
   CREATE XML INDEX SXML_IDX_Customer_Property ON Customer(CustomerData)
   USING XML INDEX PXML_IDX_Customer FOR VALUE;

Correct Answer: A
Section: Section 6
Explanation

Explanation/Reference:
The primary XML index indexes all tags, values, and paths within the XML instances in an XML column. To create a primary XML index, the table in which the XML column occurs must have a clustered index on the primary key of the table. SQL Server uses this primary key to correlate rows in the primary XML index with rows in the table that contains the XML column.

The first index on the xml type column must be the primary XML index. Using the primary XML index, the following types of secondary indexes are supported: PATH, VALUE, and PROPERTY.

Following are some guidelines for creating one or more secondary indexes:

If your workload uses path expressions significantly on XML columns, the PATH secondary XML index is likely to speed up your workload. The most common case is the use of the exist() method on XML columns in the WHERE clause of Transact-SQL.

If your workload retrieves multiple values from individual XML instances by using path expressions, clustering paths within each XML instance in the PROPERTY index may be helpful. This scenario typically occurs in a property bag scenario when properties of an object are fetched and its primary key value is known.

If your workload involves querying for values within XML instances without knowing the element or attribute names that contain those values, you may want to create the VALUE index. This typically occurs with descendant axes lookups, such as //author[last-name="Howard"], where <author> elements can occur at any level of the hierarchy. It also occurs in wildcard queries, such as /book [@* = "novel"], where the query looks for <book> elements that have some attribute having the value "novel".

QUESTION 118
You need to capture the execution plan for a query. Which statement should you use?

A. SET FORCEPLAN ON;
B. SET SHOWPLAN_XML ON;
C. SET STATISTICS IO ON;
D. SET STATISTICS TIME ON;

Correct Answer: B
Section: Section 6
Explanation

Explanation/Reference:

QUESTION 119
You are troubleshooting query performance on SQL Server 2008. You are tasked to create an estimated execution plan by using Transact-SQL. You should be able to view the plan graphically in SQL Server Management Studio. You need to ensure that the execution plan can be saved as a .sqlplan file.
Which Transact-SQL setting should you use?

A. SET SHOWPLAN_ALL ON;
B. SET SHOWPLAN_XML ON;
C. SET STATISTICS XML ON;
D. SET STATISTICS PROFILE ON;

Correct Answer: B
Section: Section 6
Explanation

Explanation/Reference:
SET SHOWPLAN_XML ON

This statement causes SQL Server not to execute Transact-SQL statements. Instead, Microsoft SQL Server returns execution plan information about how the statements are going to be executed in a well-formed XML document.

SET SHOWPLAN_TEXT ON

After this SET statement is executed, SQL Server returns the execution plan information for each query in text. The Transact-SQL statements or batches are not executed.

SET SHOWPLAN_ALL ON

This statement is similar to SET SHOWPLAN_TEXT, except that the output is in a format more verbose than that of SHOWPLAN_TEXT.

SET STATISTICS XML ON

Returns execution information for each statement after the statement executes in addition to the regular result set the statement returns. The output is a set of well-formed XML documents. SET STATISTICS XML ON produces an XML output document for each statement that executes. The difference between SET SHOWPLAN_XML ON and SET STATISTICS XML ON is that the second SET option executes the Transact-SQL statement or batch. SET STATISTICS XML ON output also includes information about the actual number of rows processed by various operators and the actual number of executes of the operators.

SET STATISTICS PROFILE ON

Returns the execution information for each statement after the statement executes in addition to the regular result set the statement returns. Both SET statement options provide output in text. The difference between SET SHOWPLAN_ALL ON and SET STATISTICS PROFILE ON is that the second SET option executes the Transact-SQL statement or batch. SET STATISTICS PROFILE ON output also includes information about the actual number of rows processed by various operators and the actual number of executes of the operators.

QUESTION 120
You are troubleshooting query performance on SQL Server 2008. You are tasked to capture a graphical execution plan. You need to save the plan to a file that can be used by SQL Server Management Studio to display the graphical execution plan.
Which file extension should you use?

A. .gif
B. .xml

C. .psql
D. .sqlplan

Correct Answer: D
Section: Section 6
Explanation

Explanation/Reference:

QUESTION 121
You have run a server side trace that created 45 trace files. You want to load the trace files on your workstation in a database table called PerfData for further analysis. You need to load three files starting at c:\my_trace_38.trc.
Which Transact-SQL statement should you use?

A. SELECT * INTO PerfData
FROM ::fn_trace_gettable('c:\my_trace.trc', 3)
B. SELECT * INTO PerfData
FROM ::fn_trace_gettable('c:\my_trace_38.trc', 3)
C. SELECT * INTO PerfData
FROM ::fn_trace_gettable('c:\my_trace38.trc', default)
D. SELECT * INTO PerfData
FROM (SELECT * FROM ::fn_trace_gettable ('c:\my_trace_38.trc', default)
UNION ALL
SELECT * FROM ::fn_trace_gettable ('c:\my_trace_39.trc', default)
UNION ALL
SELECT * FROM ::fn_trace_gettable ('c:\my_trace_40.trc', default)) Trc

Correct Answer: B
Section: Section 7
Explanation

Explanation/Reference:
sys.fn_trace_gettable returns the content of one or more trace files in tabular form.

fn_trace_gettable ('filename' , number_files)

'filename'
Specifies the initial trace file to be read. filename is nvarchar(256), with no default.

number_files
Specifies the number of rollover files to be read. This number includes the initial file specified in filename. number_files is an int.

If number_files is specified as default, fn_trace_gettable reads all rollover files until it reaches the end of the trace.

QUESTION 122
You are using SQL Server Profiler to gather deadlock information. You need to capture an XML description of a deadlock. Which event should you use?

A. Lock:Deadlock
B. Showplan XML
C. Deadlock Graph
D. Lock:Deadlock Chain

Correct Answer: C
Section: Section 7
Explanation

Explanation/Reference:
The Lock:Deadlock event class is produced when an attempt to acquire a lock is canceled because the attempt was part of a deadlock and was chosen as the deadlock victim.

Use the Lock:Deadlock event class to monitor when deadlocks occur and which objects are involved. You can use this information to determine if deadlocks are significantly affecting the performance of your application. You can then examine the application code to determine if you can make changes to minimize deadlocks.

The Deadlock Graph event class provides an XML description of a deadlock. This class occurs simultaneously with the Lock:Deadlock event class.

The Lock:Deadlock Chain event class is produced for each participant in a deadlock.

QUESTION 123
You are troubleshooting query performance on SQL Server 2008. You have profiler trace data in a table named PerfData. You need to determine which events are taking longer than one second of CPU time or run for more than two seconds.
Which Transact-SQL statement should you use?

A. SELECT TextData, Duration, CPU FROM PerfData
   WHERE EventClass = 12 AND (CPU > 1000 OR Duration > 2000)
B. SELECT TextData, Duration, CPU FROM PerfData
   WHERE EventClass = 12 AND (CPU > 1000 OR Duration > 2000000)
C. SELECT TextData, Duration, CPU FROM PerfData
   WHERE EventClass = 12 AND (CPU > 1000000 OR Duration > 2000)
D. SELECT TextData, Duration, CPU FROM PerfData
   WHERE EventClass = 12 AND (CPU > 1000000 OR Duration > 2000000)

Correct Answer: B
Section: Section 7
Explanation

Explanation/Reference:
Beginning with SQL Server 2005, the server reports the duration of an event in microseconds (one millionth, or 10-6, of a second) and the amount of CPU time used by the event in milliseconds (one thousandth, or 10-3, of a second). In SQL Server 2005 and later, the SQL Server Profiler graphical user interface displays the Duration column in milliseconds by default, but when a trace is saved to either a file or a database table, the Duration column value is written in microseconds.

QUESTION 124
You are using the Database Engine Tuning Advisor (DTA) to analyze a workload. You need to save the recommendations generated by the DTA. Which command should you use?

A. Preview Workload Table
B. Export Session Results
C. Import Session Definition
D. Export Session Definition

Correct Answer: B
Section: Section 7
Explanation

Explanation/Reference:

QUESTION 125
You need to capture and record a workload for analysis by the Database Engine Tuning Advisor (DTA). Which tool should you use?

A. DTA utility

B. Activity Monitor
C. SQL Server Profiler
D. Performance Monitor

Correct Answer: C
Section: Section 7
Explanation

Explanation/Reference:

QUESTION 126
You have a database that uses stored procedures to perform INSERT, UPDATE, DELETE, and SELECT statements.
You are tasked with providing a recommendation of indexes to be created and dropped from the database.
You need to select the appropriate method to accomplish the task.
Which method should you use?

A. Index Usage DMVs
B. Missing Index DMVs
C. SQL Server Profiler
D. Database Engine Tuning Advisor

Correct Answer: D
Section: Section 7
Explanation

Explanation/Reference:

QUESTION 127
You are tasked with creating a workload that will be used by the Database Engine Tuning Advisor (DTA).
You need to create a workload in an appropriate format.
Which format should you choose? (Each correct answer represents a complete solution. Choose three.)

A. XML File
B. Transact-SQL Script
C. SQL Server Event Log
D. SQL Server Transaction Log
E. SQL Server Profiler Trace File
F. Performance Counter Log File

Correct Answer: ABE
Section: Section 7
Explanation

Explanation/Reference:
Database Engine Tuning Advisor uses trace files, trace tables, Transact-SQL scripts, or XML files as workload input when tuning databases.

QUESTION 128
You need to build CREATE INDEX statements for all the missing indexes that SQL Server has identified.
Which dynamic management view should you use?

A. sys.dm_db_index_usage_stats
B. sys.dm_db_missing_index_details
C. sys.dm_db_missing_index_columns
D. sys.dm_db_missing_index_group_stats

Correct Answer: B
Section: Section 7
Explanation

Explanation/Reference:
sys.dm_db_missing_index_details returns detailed information about missing indexes, excluding spatial indexes.

QUESTION 129
You notice that a database server is responding slowly to queries. You run the following dynamic management views (DMV) query on the server.

```
SELECT TOP (10) wait_type, wait_time_ms FROM sys.dm_os_wait_stats
ORDER BY wait_time_ms DESC;
```

The query returns a top wait type of SOS_SCHEDULER_YIELD.
You need to identify what is causing the server response issues. Which resource should you investigate first?

A. Disk
B. CPU
C. Memory
D. Network

Correct Answer: B
Section: Section 7
Explanation

Explanation/Reference:

QUESTION 130
You attempt to query sys.dm_db_index_usage_stats to check the status on the indexes in the Contoso database. The query fails and you receive the following error:
"The user does not have permission to perform this action."
You need to have the least amount of permissions granted to access the dynamic management views.
Which permissions should be granted?

A. CONTROL
B. VIEW SERVER STATE
C. VIEW DATABASE STATE
D. CREATE EXTERNAL ACCESS ASSEMBLY

Correct Answer: B
Section: Section 7
Explanation

Explanation/Reference:

QUESTION 131
You are given a database design to evaluate. All of the tables in this database should have a clustered index.
You need to determine the tables that are missing a clustered index by using the system catalog views.
Which Transact-SQL statement should you use?

A. SELECT name AS table_name FROM sys.tables
   WHERE OBJECTPROPERTY(object_id,'TableHasClustIndex') = 0
   ORDER BY name;
B. SELECT name AS table_name
   FROM sys.tables WHERE OBJECTPROPERTY(object_id,'TableHasUniqueCnst') = 0 ORDER BY

name;

C. SELECT name AS table_name FROM sys.tables
WHERE OBJECTPROPERTY(object_id,'TableHasClustIndex') = 0 AND
OBJECTPROPERTY(object_id,'TableHasUniqueCnst') = 1 ORDER BY name;

D. SELECT name AS table_name FROM sys.tables
WHERE OBJECTPROPERTY(object_id,'TableHasClustIndex') = 1 AND OBJECTPROPERTY
(object_id,'TableHasUniqueCnst') = 1
ORDER BY name;

Correct Answer: A
Section: Section 7
Explanation

Explanation/Reference:

QUESTION 132
You need to identify which tables are referenced by name in a stored procedure that does not use dynamic SQL.
Which catalog view should you use?

A. sys.procedures
B. INFORMATION_SCHEMA.TABLES
C. INFORMATION_SCHEMA.ROUTINES
D. sys.sql_expression_dependencies

Correct Answer: D
Section: Section 7
Explanation

Explanation/Reference:

QUESTION 133
4.
You need to manually raise an error.
The error message that will be returned will display a message that contains parameters 1, 2, 3

```
sp_addmessage @msgnum = 6000,
@severity = 16,
@msgtext = N'Your message (%d), (%d), (%d)';
GO
```

You have to raise message to get correct message.. 'Your message (1), (2), (3).'

Which statement will you use?

A. RAISE_ERROR(60000, 16, 1, 1, 2, 3)

Correct Answer: A
Section: New questions
Explanation

Explanation/Reference:
CORRECT ANSWER:

```
RAISERROR (6000, -- Message id.
                16, -- Severity,
                1, -- State,
                 , 1, 2, 3)
```

QUESTION 134
You are reviewing a trigger in the database which was deployed with the folowing script:

```
EXECUTE AS USER = 'BuildUser'
GO

CREATE TRIGGER Inventory.TR_Stock ON Inventory.Stock
FOR INSERT, UPDATE, DELETE
EXECUTE AS SELF
AS ...
```

A user 'WebUser' insert rows into Inventory.Stock table. You need to identify under which security context the trigger will execute.

A. DBO
B. Inventory
C. WebUser
D. BuildUser

Correct Answer: D
Section: New questions
Explanation

Explanation/Reference:

QUESTION 135
Your database contains Products and Orders tables. You need to write a query which return ProductID of the products which have not been placed in any order. Which operator can you use.

A. Union
B. Union ALL
C. Intersect
D. Exclude

Correct Answer: D
Section: New questions
Explanation

Explanation/Reference: