Microsoft 70-461 Exam Questions & Answers

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Microsoft 70-461 Exam Questions & Answers

Exam Name: Querying Microsoft SQL Server 2012

Mix Questions I

QUESTION 1
You develop a Microsoft SQL Server 2012 server database that supports an application. The application contains a table that has the following definition:

```
CREATE TABLE Inventory
(ItemID int NOT NULL PRIMARY KEY,
ItemsInStore int NOT NULL,
ItemsInWarehouse int NOT NULL)
```

You need to create a computed column that returns the sum total of the ItemsInStore and ItemsInWarehouse values for each row. Which Transact-SQL statement should you use?

A.
```
ALTER TABLE Inventory
ADD TotalItems AS ItemsInStore + ItemsInWarehouse
```
B.
```
ALTER TABLE Inventory
ADD ItemsInStore - ItemsInWarehouse = TotalItems
```
C.
```
ALTER TABLE Inventory
ADD TotalItems = ItemsInStore + ItemsInWarehouse
```
D.
```
ALTER TABLE Inventory
ADD TotalItems AS SUM(ItemsInStore, ItemslnWarehouse);
```

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct.

Reference: http://technet.microsoft.com/en-us/library/ms190273.aspx

QUESTION 2
You develop a database for a travel application. You need to design tables and other database objects. You create the Airline_Schedules table. You need to store the departure and arrival dates and times of flights along with time zone information. What should you do?

A. Use the CAST function.
B. Use the DATE data type.
C. Use the FORMAT function.
D. Use an appropriate collation.
E. Use a user-defined table type.
F. Use the VARBINARY data type.
G. Use the DATETIME data type.
H. Use the DATETIME2 data type.
I. Use the DATETIMEOFFSET data type.
J. Use the TODATETIMEOFFSET function.

Correct Answer: I
Section: (none)
Explanation

Explanation/Reference:
Reference: http://msdn.microsoft.com/en-us/library/ff848733.aspx
Reference: http://msdn.microsoft.com/en-us/library/bb630289.aspx

QUESTION 3
You have a database that contains the tables shown in the exhibit. (Click the Exhibit button.)

You need to create a view named uv_CustomerFullName to meet the following requirements:
- The code must NOT include object delimiters.
- The view must be created in the Sales schema.
- Columns must only be referenced by using one-part names.
- The view must return the first name and the last name of all customers.
- The view must prevent the underlying structure of the customer table from being changed.
- The view must be able to resolve all referenced objects, regardless of the user's default schema.

Which code segment should you use?
To answer, type the correct code in the answer area.

A.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

```
CREATE VIEW Sales.uv_CustomerFullName
WITH SCHEMABINDING
AS
SELECT FirstName, LastName
FROM Sales.Customers
```

Reference: http://msdn.microsoft.com/en-us/library/ms187956.aspx

QUESTION 4
You create a stored procedure that will update multiple tables within a transaction. You need to ensure that if the stored procedure raises a run-time error, the entire transaction is terminated and rolled back. Which Transact-SQL statement should you include at the beginning of the stored procedure?

A. SET XACT_ABORT ON
B. SET ARITHABORT ON
C. TRY
D. BEGIN
E. SET ARITHABORT OFF
F. SET XACT_ABORT OFF

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct.

Reference: http://msdn.microsoft.com/en-us/library/ms190306.aspx
Reference: http://msdn.microsoft.com/en-us/library/ms188792.aspx

QUESTION 5
Your database contains two tables named DomesticSalesOrders and InternationalSalesOrders. Both tables contain more than 100 million rows. Each table has a Primary Key column named SalesOrderId. The data in the two tables is distinct from one another. Business users want a report that includes aggregate information about the total number of global sales and total sales amounts. You need to ensure that your query executes in the minimum possible time. Which query should you use?

A.
```
SELECT COUNT(*) AS NumberOfSales, SUM(SalesAmount) AS TotalSalesAmount
FROM (
  SELECT SalesOrderId, SalesAmount
  FROM DomesticSalesOrders
  UNION ALL
  SELECT SalesOrderId, SalesAmount
  FROM InternationalSalesOrders
  ) AS p
```

B.
```
SELECT COUNT(*) AS NumberOfSales, SUM(SalesAmount) AS TotalSalesAmount
FROM (
  SELECT SalesOrderId, SalesAmount
  FROM DomesticSalesOrders
  UNION
  SELECT SalesOrderId, SalesAmount
  FROM InternationalSalesOrders
  ) AS p
```

C.
```
SELECT COUNT(*) AS NumberOfSales, SUM(SalesAmount) AS TotalSalesAmount
FROM DomesticSalesOrders
UNION
SELECT COUNT(*) AS NumberOfSales, SUM(SalesAmount) AS TotalSalesAmount
```

```
   FROM InternationalSalesOrders
```

D.
```
SELECT COUNT(*) AS NumberOfSales, SUM(SalesAmount) AS TotalSalesAmount
FROM DomesticSalesOrders
UNION ALL
SELECT COUNT(*) AS NumberOfSales, SUM(SalesAmount) AS TotalSalesAmount
FROM InternationalSalesOrders
```

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct.

Reference: http://msdn.microsoft.com/en-us/library/ms180026.aspx
Reference: http://blog.sqlauthority.com/2009/03/11/sql-server-difference-between-union-vs-union-all-optimal-performance-comparison/

QUESTION 6
You develop a Microsoft SQL Server 2012 database. You need to create a batch process that meets the following requirements:

- Returns a result set based on supplied parameters.
- Enables the returned result set to perform a join with a table.

Which object should you use?

A. Inline user-defined function
B. Stored procedure
C. Table-valued user-defined function
D. Scalar user-defined function

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
You are a database developer of a Microsoft SQL Server 2012 database. You are designing a table that will store Customer data from different sources. The table will include a column that contains the CustomerID from the source system and a column that contains the SourceID. A sample of this data is as shown in the following table.

SourceID	CustomerID	Customer Name
1	234	John Smith
3	7345	Jason Warren
3	4402	Susan Burk
2	866	Michael Allen

You need to ensure that the table has no duplicate CustomerID within a SourceID. You also need to ensure that the data in the table is in the order of SourceID and then CustomerID. Which Transact- SQL statement should you use?

A.
```
CREATE TABLE Customer
(SourceID int NOT NULL IDENTITY,
CustomerID int NOT NULL IDENTITY,
CustomerName varchar(255) NOT NULL);
```

B.
```
CREATE TABLE Customer
(SourceID int NOT NULL,
CustomerID int NOT NULL PRIMARY KEY CLUSTERED,
CustomerName varchar(255) NOT NULL);
```

C.
```
CREATE TABLE Customer
(SourceID int NOT NULL PRIMARY KEY CLUSTERED,
CustomerID int NOT NULL UNIQUE,
CustomerName varchar(255) NOT NULL);
```

D.
```
CREATE TABLE Customer
(SourceID int NOT NULL,
CustomerID int NOT NULL,
CustomerName varchar(255) NOT NULL,
CONSTRAINT PK_Customer PRIMARY KEY CLUSTERED
(SourceID, CustomerID));
```

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Verified the answer as correct.

QUESTION 8
You administer a Microsoft SQL Server 2012 database that includes a table named Products. The Products table has columns named ProductId, ProductName, and CreatedDateTime. The table contains a unique constraint on the combination of ProductName and CreatedDateTime. You need to modify the Products table to meet the following requirements:

- Remove all duplicates of the Products table based on the ProductName column.
- Retain only the newest Products row.

Which Transact-SQL query should you use?

A.
```
WITH CTEDupRecords
AS
(
  SELECT MAX(CreatedDateTime) AS CreatedDateTime, ProductName
  FROM Products
  GROUP BY ProductName
  HAVING COUNT(*) > 1
)
DELETE p
FROM Products p
JOIN CTEDupRecords cte ON
p.ProductName = cte.ProductName
AND p.CreatedDateTime > cte.CreatedDateTime
```

B.
```
WITH CTEDupRecords
AS
(
  SELECT MAX(CreatedDateTime) AS CreatedDateTime, ProductName
  FROM Products
  GROUP BY ProductName
  HAVING COUNT(*) > 1
```

```
)
DELETE p
FROM Products p
JOIN CTEDupRecords cte ON
cte.ProductName = p.ProductName
AND cte.CreatedDateTime > p.CreatedDateTime
```

C.
```
WITH CTEDupRecords
AS
(
  SELECT MIN(CreatedDateTime) AS CreatedDateTime, ProductName
  FROM Products
  GROUP BY ProductName
)
DELETE p
FROM Products p
JOIN CTEDupRecords cte ON
p.ProductName = cte.ProductName
```

D.
```
WITH CTEDupRecords
AS
(
  SELECT MAX(CreatedDateTime) AS CreatedDateTime, ProductName
  FROM Products
  GROUP BY ProductName
  HAVING COUNT(*) > 1
)
DELETE p
FROM Products p
JOIN CTEDupRecords cte ON
p.ProductName = cte.ProductName
```

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct.

QUESTION 9
You generate a daily report according to the following query:

```
SELECT c.CustomerName
FROM Sales.Customer c
WHERE Sales.ufnGetLastOrderDate(c.CustomerID) <
 DATEADD(DAY, -90, GETDATE())
```

The Sales.ufnGetLastOrderDate user-defined function (UDF) is defined as follows:

```
CREATE FUNCTION Sales.ufnGetLastOrderDate(@CustomerID int)
RETURNS datetime
AS
BEGIN
  DECLARE @lastOrderDate datetime
  SELECT @lastOrderDate = MAX(OrderDate)
  FROM Sales.SalesOrder
  WHERE CustomerID = @CustomerID
  RETURN @lastOrderDate
END
```


You need to improve the performance of the query. What should you do?

A. Drop the UDF and rewrite the report query as follows:

```
WITH cte(CustomerID, LastOrderDate) AS (
  SELECT CustomerID, MAX(OrderDate) AS [LastOrderDate]
  FROM Sales.SalesOrder
  GROUP BY CustomerID
)
SELECT c.CustomerName
FROM cte
INNER JOIN Sales.Customer c
ON cte.CustomerID = c.CustomerID
WHERE cte.LastOrderDate < DATEADD(DAY, -90, GETDATE())
```

B. Drop the UDF and rewrite the report query as follows:

```
SELECT c.CustomerName
FROM Sales.Customer c
WHERE NOT EXISTS (
  SELECT s.OrderDate
  FROM Sales.SalesOrder
  WHERE s.OrderDate > DATEADD(DAY, -90, GETDATE())
   AND s.CustomerID = c.CustomerID)
```

C. Drop the UDF and rewrite the report query as follows:

```
SELECT DISTINCT c.CustomerName
FROM Sales.Customer c
INNER JOIN Sales.SalesOrder s
ON c.CustomerID = s.CustomerID
WHERE s.OrderDate < DATEADD(DAY, -90, GETDATE())
```

D. Rewrite the report query as follows:

```
SELECT c.CustomerName
FROM Sales.Customer c
WHERE NOT EXISTS (SELECT OrderDate FROM Sales.ufnGetRecentOrders(c.CustomerID,
90))
```

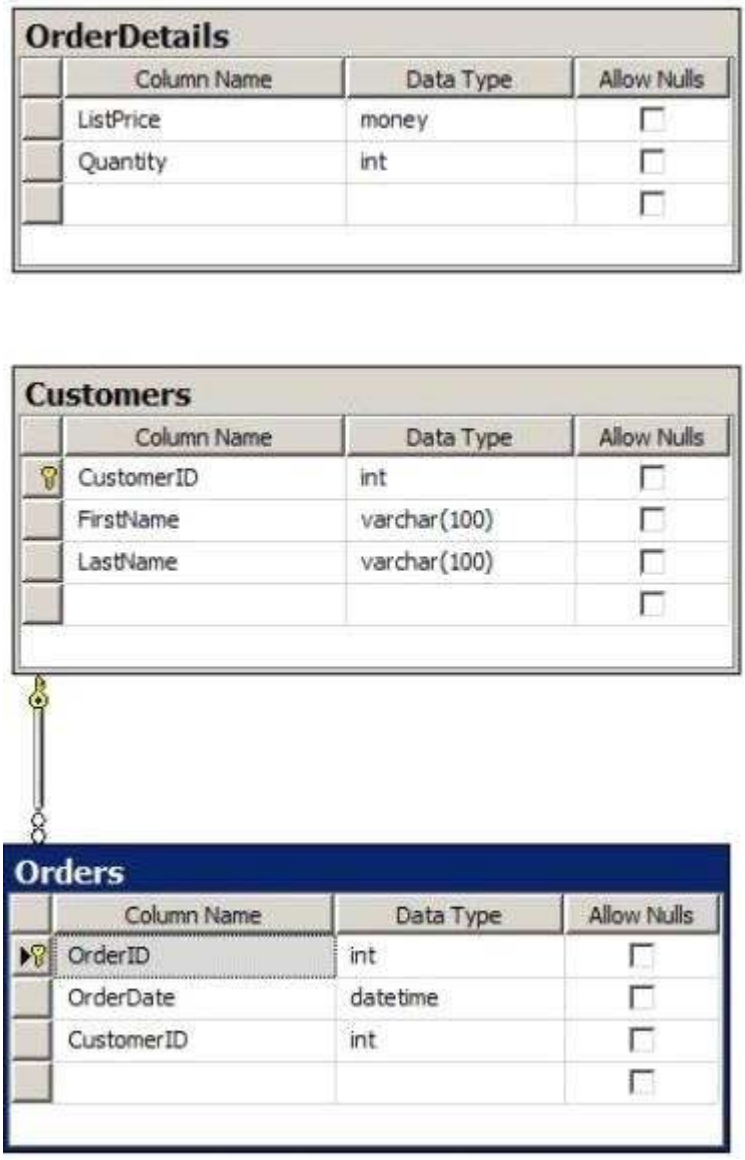
Rewrite the UDF as follows:

```
CREATE FUNCTION Sales.ufnGetRecentOrders(@CustomerID int, @MaxAge datetime)
RETURNS TABLE AS RETURN (
  SELECT OrderDate
  FROM Sales.SalesOrder
  WHERE s.CustomerID = @CustomerID
   AND s.OrderDate > DATEADD(DAY, -@MaxAge, GETDATE())
```

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
You have a database that contains the tables shown in the exhibit. (Click the Exhibit button).



You need to create a query for a report. The query must meet the following requirements:

- NOT use object delimiters.
- Return the most recent orders first.
- Use the first initial of the table as an alias.
- Return the most recent order date for each customer.
- Retrieve the last name of the person who placed the order.
- Return the order date in a column named MostRecentOrderDate that appears as the last column in the report.

The solution must support the ANSI SQL-99 standard.
Which code segment should you use?
To answer, type the correct code in the answer area.

A.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

```
SELECT C.LastName, MAX(O.OrderDate) AS MostRecentOrderDate
FROM Customers AS C INNER JOIN Orders AS O
ON C.CustomerID = O.CustomerID
GROUP BY C.LastName
ORDER BY O.OrderDate DESC
```

QUESTION 11
You have an XML schema collection named Sales.InvoiceSchema. You need to declare a variable of the XML type named XML1. The solution must ensure that XML1 is validated by using Sales.InvoiceSchema.
Which code segment should you use?
To answer, type the correct code in the answer area.

A.

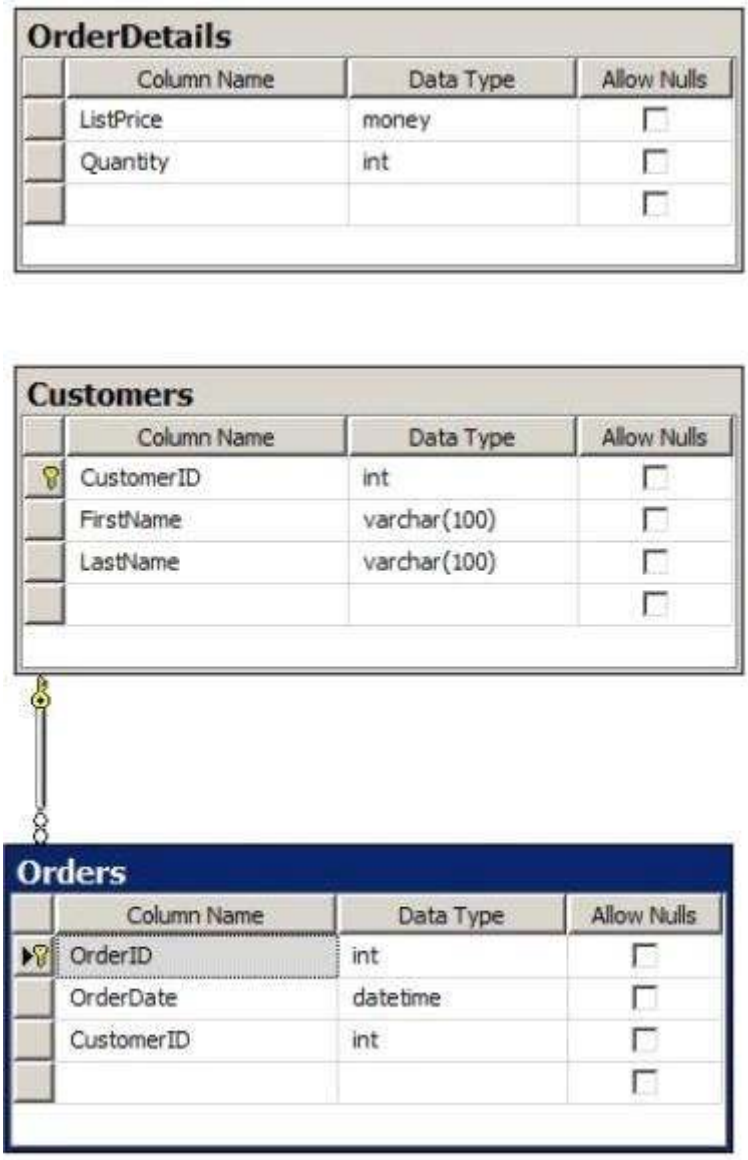
Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

```
DECLARE @XML1 XML(Sales.InvoiceSchema)
```

Reference: http://msdn.microsoft.com/en-us/library/ms176009.aspx

QUESTION 12
You have a database that contains the tables shown in the exhibit. (Click the Exhibit button.)



You have an application named Appl. You have a parameter named @Count that uses the int data type. App1 is configured to pass @Count to a stored procedure. You need to create a stored procedure named usp_Customers for Appl. Usp_Customers must meet the following requirements:

- NOT use object delimiters.
- Minimize sorting and counting.
- Return only the last name of each customer in alphabetical order.
- Return only the number of rows specified by the @Count parameter.
- The solution must NOT use BEGIN and END statements.

Which code segment should you use?
To answer, type the correct code in the answer area.

A.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

```
CREATE PROCEDURE usp_Customers @Count int
AS
SELECT TOP(@Count) Customers.LastName
FROM Customers
ORDER BY Customers.LastName
```

Mix Questions II

QUESTION 1
You use a Microsoft SQL Server 2012 database that contains a table named BlogEntry that has the following columns:

Column name	Data type
Id	bigint
EntryDateTime	datetime
Summary	nvarchar(max)

Id is the Primary Key.
You need to append the "This is in a draft stage" string to the Summary column of the recent 10 entries based on the values in EntryDateTime. Which Transact-SQL statement should you use?

A.
```
UPDATE TOP(10) BlogEntry
SET Summary.WRITE(N' This is in a draft stage', NULL, 0)
```

B.
```
UPDATE BlogEntry
SET Summary = CAST(N' This is in a draft stage' as nvarchar(max))
WHERE Id IN(SELECT TOP(10) Id FROM BlogEntry ORDER BY EntryDateTime DESC)
```

C.
```
UPDATE BlogEntry
SET Summary.WRITE(N' This is in a draft stage', NULL, 0) FROM (
SELECT TOP(10) Id FROM BlogEntry ORDER BY EntryDateTime DESC) AS s
WHERE BlogEntry.Id = s.ID
```

D.
```
UPDATE BlogEntry
SET Summary.WRITE(N' This is in a draft stage', 0, 0)
WHERE Id IN(SELECT TOP(10) Id FROM BlogEntry ORDER BY EntryDateTime DESC)
```

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct.

QUESTION 2
You use Microsoft SQL Server 2012 to develop a database application. You create a stored procedure named DeleteJobCandidate. You need to ensure that if DeleteJobCandidate encounters an error, the execution of the stored procedure reports the error number. Which Transact-SQL statement should you use?

A.
```
DECLARE @ErrorVar INT;
DECLARE @RowCountVar INT;
EXEC DeleteJobCandidate
SELECT @ErrorVar = @@ERROR, @RowCountVar = @@ROWCOUNT;
IF (@ErrorVar <> 0)
  PRINT N'Error = ' + CAST(@@ErrorVar AS NVARCHAR(8)) +
    N', Rows Deleted = ' + CAST(@@RowCountVar AS NVARCHAR(8));
GO
```

B.
```
DECLARE @ErrorVar INT;
DECLARE @RowCountVar INT;
EXEC DeleteJobCandidate
SELECT @ErrorVar = ERROR_STATE(), @RowCountVar = @@ROWCOUNT;
IF (@ErrorVar <> 0)
```

```
    PRINT N'Error = ' + CAST(ERRORSTATE() AS NVARCHAR(8)) +
      N', Rows Deleted = ' + CAST(@@RowCountVar AS NVARCHAR(8));
  GO
```

C.
```
  EXEC DeleteJobCandidate
  IF (ERROR_STATE() != 0)
    PRINT N'Error = ' + CAST(@@ERROR AS NVARCHAR(8)) +
      N', Rows Deleted = ' + CAST(@@ROWCOUNT AS NVARCHAR(8));
  GO
```

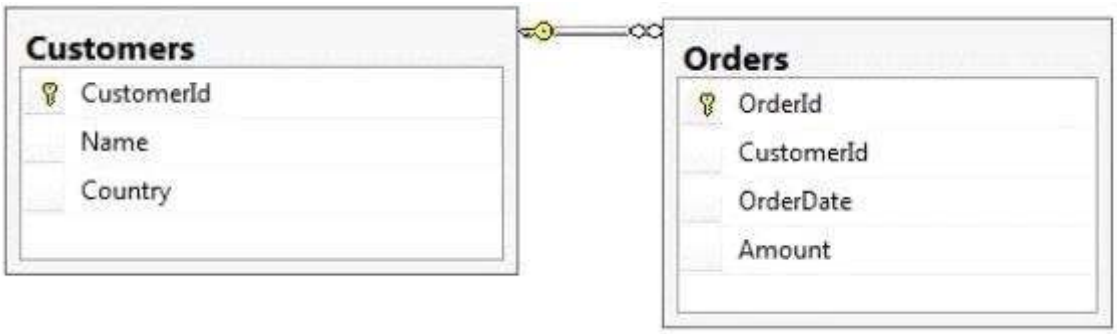
D.
```
  EXEC DeleteJobCandidate
  PRINT N'Error = ' + CAST(@@ERROR AS NVARCHAR(8)) +
    N', Rows Deleted = ' + CAST(@@ROWCOUNT AS NVARCHAR(8));
  GO
```

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct.

Reference: http://msdn.microsoft.com/en-us/library/ms190193.aspx
Reference: http://msdn.microsoft.com/en-us/library/ms188790.aspx

QUESTION 3
You administer a Microsoft SQL Server 2012 database named ContosoDb. Tables are defined as shown in the exhibit. (Click the Exhibit button.)



You need to display rows from the Orders table for the Customers row having the CustomerId value set to 1 in the following XML format.

```
<CUSTOMERS Name="Customer A" Country="Australia">
  <ORDERS OrderID="1" OrderDate="2001-01-01" Amount="3400.00" />
  <ORDERS OrderID="2" OrderDate="2002-01-01" Amount="4300.00" />
</CUSTOMERS>
```

Which Transact-SQL query should you use?

A.
```
  SELECT OrderId, OrderDate, Amount, Name, Country
  FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
  WHERE Customers.CustomerId = 1
  FOR XML RAW
```

B.
```
  SELECT OrderId, OrderDate, Amount, Name, Country
  FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
  WHERE Customers.CustomerId = 1
  FOR XML RAW, ELEMENTS
```

C. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId

WHERE Customers.CustomerId = 1
FOR XML AUTO

D. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId - Customers.CustomerId
WHERE Customers.CustomerId= 1
FOR XML AUTO, ELEMENTS

E. SELECT Name, Country, OrderId, OrderDate, Amount
FROM Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId= 1
FOR XML AUTO

F. SELECT Name, Country, OrderId, OrderDate, Amount
FROM Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId= 1
FOR XML AUTO, ELEMENTS

G. SELECT Name AS '@Name', Country AS '@Country', OrderId, OrderDate, Amount
FROM Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId= 1
FOR XML PATH ('Customers')

H. SELECT Name AS 'Customers/Name', Country AS 'Customers/Country', OrderId, OrderDate, Amount
FROM Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId= 1
FOR XML PATH ('Customers')

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct.

QUESTION 4
You develop a Microsoft SQL Server 2012 database that contains a table named Customers. The Customers table has the following definition:

```
CREATE TABLE [dbo].[Customers](
   [CustomerId] [bigint] NOT NULL,
   [MobileNumber] [nvarchar](25) NOT NULL,
   [HomeNumber] [nvarchar](25) NULL,
   [Name] [nvarchar](50) NOT NULL,
   [Country] [nvarchar](25) NOT NULL,
    CONSTRAINT [PK_Customers] PRIMARY KEY CLUSTERED
   (
     [CustomerId] ASC
   ) ON [PRIMARY]
) ON [PRIMARY]
```

You need to create an audit record only when either the MobileNumber or HomeNumber column is updated.
Which Transact-SQL query should you use?

A.
```
CREATE TRIGGER TrgPhoneNumberChange
ON Customers FOR UPDATE
AS
IF COLUMNS_UPDATED (HomeNumber, MobileNumber)
- - Create Audit Records
```

B.
```
CREATE TRIGGER TrgPhoneNumberChange
ON Customers FOR UPDATE
AS
IF EXISTS( SELECT HomeNumber FROM inserted) OR
EXISTS (SELECT MobileNumber FROM inserted)
- - Create Audit Records
```

C.
```
CREATE TRIGGER TrgPhoneNumberChange
ON Customers FOR UPDATE
AS
IF COLUMNS_CHANGED (HomeNumber, MobileNumber)
- - Create Audit Records
```

D.
```
CREATE TRIGGER TrgPhoneNumberChange
ON Customers FOR UPDATE
AS
IF UPDATE (HomeNumber) OR UPDATE (MobileNumber)
- - Create Audit Records
```

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct.

Reference: http://msdn.microsoft.com/en-us/library/bb510663.aspx
Reference: http://msdn.microsoft.com/en-us/library/ms186329.aspx

QUESTION 5
You have three tables that contain data for dentists, psychiatrists, and physicians. You create a view that is used to look up their email addresses and phone numbers. The view has the following definition:

```
Create view apt.vwProviderList
(Specialty, CompanyID, CompanyNumber, LastName,
 FirstName, BusinessName, Email, Phone)
as

SELECT 'Dentist' as Specialty
  , DentistID
  , DentistNumber
  , DentistLastName
  , DentistFirstName
  , DentistBusinessName
  , Email
  , Phone
FROM apt.Dentist
UNION ALL
SELECT 'Psychiatrist' as Specialty
  , PsychiatristID
  , PsychiatristNumber
  , PsychiatristLastName
  , PsychiatristFirstName
  , PsychiatristBusinessName
  , Email
  , Phone
SELECT 'Physician' as Specialty
  , PhysicianID
  , PhysicianNumber
  , PhysicianLastName
  , PhysicianFirstName
  , PhysicianBusinessName
  , Email
  , Phone
FROM apt.Physician
GO
```

You need to ensure that users can update only the phone numbers and email addresses by using this view. What should you do?

A. Alter the view. Use the EXPAND VIEWS query hint along with each SELECT statement.
B. Create an INSTEAD OF UPDATE trigger on the view.
C. Drop the view. Re-create the view by using the SCHEMABINDING clause, and then create an index on the view.
D. Create an AFTER UPDATE trigger on the view.

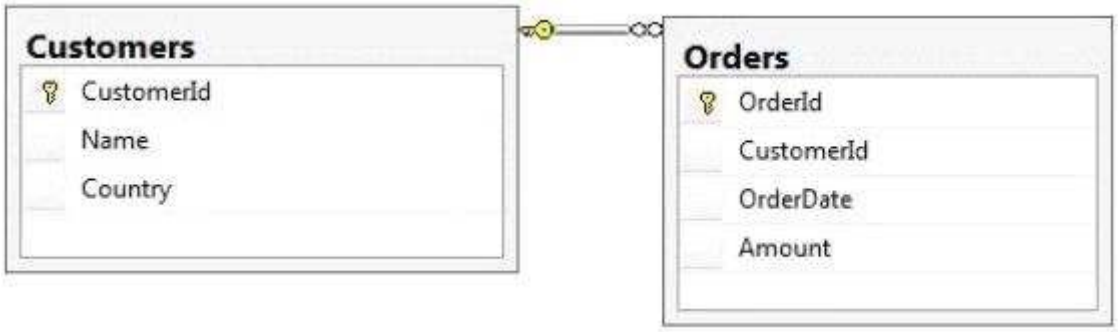
Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

Verified answer as correct.

Reference: http://msdn.microsoft.com/en-us/library/ms187956.aspx

QUESTION 6
You administer a Microsoft SQL Server 2012 database named ContosoDb. Tables are defined as shown in the exhibit. (Click the Exhibit button.)



You need to display rows from the Orders table for the Customers row having the CustomerId value set to 1 in the following XML format.

```
<Customers Name="Customer A" Country="Australia">
  <OrderId>1</OrderId>
  <OrderDate>2000-01-01T00:00:00</OrderDate>
  <Amount>3400.00</Amount>
</Customers>
<Customers Name="Customer A" Country="Australia">
  <OrderId>2</OrderId>
  <OrderDate>2001-01-01T00:00:00</OrderDate>
  <Amount>4300.00</Amount>
</Customers>
```

Which Transact-SQL query should you use?

A.
```
SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders INNER JOIN
Customers ON Orders.CustomerId = Customers-CustomerId WHERE
Customers.CustomerId = 1
FOR XML RAW
```

B.
```
SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders INNER JOIN
Customers ON Orders.CustomerId = Customers.CustomerId WHERE
Customers.CustomerId = 1
FOR XML RAW, ELEMENTS
```

C.
```
SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders INNER JOIN
Customers ON Orders.CustomerId = Customers.CustomerId WHERE
Customers.CustomerId = 1
FOR XML AUTO
```

D.
```
SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders INNER JOIN
Customers ON Orders.CustomerId - Customers.CustomerId WHERE
Customers.CustomerId= 1
FOR XML AUTO, ELEMENTS
```

E.
```
SELECT Name, Country, OrderId, OrderDate, Amount FROM Orders INNER JOIN
Customers ON Orders.CustomerId= Customers.CustomerId WHERE
Customers.CustomerId= 1
```

```
FOR XML AUTO
```

F.
```
SELECT Name, Country, Crderld, OrderDate, Amount FROM Orders INNER JOIN
Customers ON Orders.CustomerId= Customers.CustomerId WHERE
Customers.CustomerId= 1
FOR XML AUTO, ELEMENTS
```

G.
```
SELECT Name AS '@Name', Country AS '@Country', OrderId, OrderDate, Amount FROM
Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId WHERE
Customers.CustomerId= 1
FOR XML PATH ('Customers')
```

H.
```
SELECT Name AS 'Customers/Name', Country AS 'Customers/Country', OrderId,
OrderDate, Amount FROM Orders
INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId WHERE
Customers.CustomerId= 1
FOR XML PATH ('Customers')
```

Correct Answer: G
Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct.

QUESTION 7
You use Microsoft SQL Server 2012 to write code for a transaction that contains several statements. There is high contention between readers and writers on several tables used by your transaction. You need to minimize the use of the tempdb space. You also need to prevent reading queries from blocking writing queries. Which isolation level should you use?

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Reference: http://msdn.microsoft.com/en-us/library/ms173763.aspx

QUESTION 8
You create a table that has the StudentCode, SubjectCode, and Marks columns to record mid-year marks for students. The table has marks obtained by 50 students for various subjects. You need to ensure that the top half of the students arranged by their average marks must be given a rank of 1 and the remaining students must be given a rank of 2. Which Transact-SQL query should you use?

A.
```
SELECT StudentCode as Code,
  RANK() OVER (ORDER BY AVG (Marks) DESC) AS Value
FROM StudentMarks
GROUP BY StudentCode
```

B.
```
SELECT Id, Name, Marks,
  DENSE_RANK() OVER (ORDER BY Marks DESC) AS Rank
FROM StudentMarks
```

C.
```
SELECT StudentCode as Code,
  DENSE_RANK() OVER (ORDER BY AVG (Marks) DESC) AS Value
FROM StudentMarks
GROUP BY StudentCode
```

D.
```
SELECT StudentCode as Code,
```

```
  NTILE (2) OVER (ORDER BY AVG (Marks) DESC) AS Value
FROM StudentMarks
GROUP BY StudentCode
```

E.
```
SELECT StudentCode AS Code,Marks AS Value FROM (
  SELECT StudentCode, Marks AS Marks,
    RANK() OVER (PARTITION BY SubjectCode ORDER BY Marks ASC) AS Rank
  FROM StudentMarks) tmp
WHERE Rank = 1
```

F.
```
SELECT StudentCode AS Code,Marks AS Value FROM (
  SELECT StudentCode, Marks AS Marks,
    RANK() OVER (PARTITION BY SubjectCode ORDER BY Marks DESC) AS Rank
  FROM StudentMarks) tmp
WHERE Rank = 1
```

G.
```
SELECT StudentCode AS Code,Marks AS Value FROM (
  SELECT StudentCode, Marks AS Marks,
    RANK () OVER (PARTITION BY StudentCode ORDER BY Marks ASC) AS Rank
  FROM StudentMarks) tmp
WHERE Rank = 1
```

H.
```
SELECT StudentCode AS Code,Marks AS Value FROM (
  SELECT StudentCode, Marks AS Marks,
    RANXO OVER (PARTITION BY StudentCode ORDER BY Marks DESC) AS Rank
  FROM StudentMarks) tmp
WHERE Rank = 1
```

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
You administer several Microsoft SQL Server 2012 database servers. Merge replication has been configured for an application that is distributed across offices throughout a wide area network (WAN). Many of the tables involved in replication use the XML and varchar (max) data types. Occasionally, merge replication fails due to timeout errors. You need to reduce the occurrence of these timeout errors. What should you do?

A. Set the Merge agent on the problem subscribers to use the slow link agent profile.
B. Create a snapshot publication, and reconfigure the problem subscribers to use the snapshot publication.
C. Change the Merge agent on the problem subscribers to run continuously.
D. Set the Remote Connection Timeout on the Publisher to 0.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
You administer a database that includes a table named Customers that contains more than 750 rows. You create a new column named PartitionNumber of the int type in the table. You need to assign a PartitionNumber for each record in the Customers table. You also need to ensure that the PartitionNumber satisfies the following conditions:
- Always starts with 1.
- Starts again from 1 after it reaches 100.

Which Transact-SQL statement should you use?

A.
```
CREATE SEQUENCE CustomerSequence AS int
START WITH 0
INCREMENT BY 1
MINVALUE 1
MAXVALUE 100
UPDATE Customers SET PartitionNumber = NEXT VALUE FOR CustomerSequence
DROP SEQUENCE CustomerSequence
```

B.
```
CREATE SEQUENCE CustomerSequence AS int
START WITH 1
INCREMENT BY 1
MINVALUE 1
MAXVALUE 100
CYCLE
UPDATE Customers SET PartitionNumber = NEXT VALUE FOR CustomerSequence
DROP SEQUENCE CustomerSequence
```

C.
```
CREATE SEQUENCE CustomerSequence AS int
START WITH 1
INCREMENT BY 1
MINVALUE 1
MAXVALUE 100
UPDATE Customers SET PartitionNumber = NEXT VALUE FOR CustomerSequence + 1
DROP SEQUENCE CustomerSequence
```

D.
```
CREATE SEQUENCE CustomerSequence AS int
START WITH 1
INCREMENT BY 1
MINVALUE 0
MAXVALUE 100
CYCLE
UPTATE Customers SET PartitionNumber = NEXT VALUE FOR CustomerSequence
DROP SEQUENCE CustomerSequence
```

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct.

Reference: http://msdn.microsoft.com/en-us/library/ff878091.aspx

QUESTION 11
You use Microsoft SQL Server 2012 to develop a database application. You need to create an object that meets the following requirements:

- Takes an input variable
- Returns a table of values
- Cannot be referenced within a view

Which object should you use?

A. Scalar-valued function
B. Inline function
C. User-defined data type
D. Stored procedure

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12
You use a contained database named ContosoDb within a domain. You need to create a user who can log on to the ContosoDb database. You also need to ensure that you can port the database to different database servers within the domain without additional user account configurations. Which type of user should you create?

A. User mapped to a certificate
B. SQL user without login
C. Domain user
D. SQL user with login

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Reference: http://msdn.microsoft.com/en-us/library/ff929071.aspx

QUESTION 13
You administer a Microsoft SQL Server 2012 server. You plan to deploy new features to an application. You need to evaluate existing and potential clustered and non-clustered indexes that will improve performance. What should you do?

A. Query the sys.dm_db_index_usage_stats DMV.
B. Query the sys.dm_db_missing_index_details DMV.
C. Use the Database Engine Tuning Advisor.
D. Query the sys.dm_db_missing_index_columns DMV.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 14
You use Microsoft SQL Server 2012 to develop a database application. You create a stored procedure named dbo.ModifyData that can modify rows. You need to ensure that when the transaction fails, dbo.ModifyData meets the following requirements:
- Does not return an error
- Closes all opened transactions

Which Transact-SQL statement should you use?

A.
```
BEGIN TRANSACTION
    BEGIN TRY
      EXEC dbo.ModifyData
      COMMIT TRANSACTION
    END TRY
    BEGIN CATCH
      IF @@ TRANCOUNT = 0
      ROLLBACK TRANSACTION;
    END CATCH
```

B.
```
BEGIN TRANSACTION
    BEGIN TRY
```

```
    EXEC dbo.ModifyData
    COMMIT TRANSACTION
  END TRY
  BEGIN CATCH
    IF @@ERROR != 0
    ROLLBACK TRANSACTION;
   THROW;
  END CATCH
```

C.
```
BEGIN TRANSACTION
  BEGIN TRY
    EXEC dbo.ModifyData
    COMMIT TRANSACTION
  END TRY
  BEGIN CATCH
    IF @@TRANCOUNT = 0
    ROLLBACK TRANSACTION;
   THROW;
  END CATCH
```

D.
```
BEGIN TRANSACTION
  BEGIN TRY
    EXEC dbo.ModifyData
    COMMIT TRANSACTION
  END TRY
  BEGIN CATCH
    IF @@ERROR != 0
    ROLLBACK TRANSACTION;
  END CATCH
```

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct.

QUESTION 15
You are developing a database application by using Microsoft SQL Server 2012. An application that uses a database begins to run slowly. You discover that during reads, the transaction experiences blocking from concurrent updates. You need to ensure that throughout the transaction the data maintains the original version. What should you do?

A. Add a HASH hint to the query.
B. Add a LOOP hint to the query.
C. Add a FORCESEEK hint to the query.
D. Add an INCLUDE clause to the index.
E. Add a FORCESCAN hint to the Attach query.
F. Add a columnstore index to cover the query.
G. Enable the optimize for ad hoc workloads option.
H. Cover the unique clustered index with a columnstore index.
I. Include a SET FORCEPLAN ON statement before you run the query.
J. Include a SET STATISTICS PROFILE ON statement before you run the query.
K. Include a SET STATISTICS SHOWPLAN_XML ON statement before you run the query.
L. Include a SET TRANSACTION ISOLATION LEVEL REPEATABLE READ statement before you run the query.
M. Include a SET TRANSACTION ISOLATION LEVEL SNAPSHOT statement before you run the query.
N. Include a SET TRANSACTION ISOLATION LEVEL SERIALIZABLE statement before you run the query.

Correct Answer: M
Section: (none)
Explanation

Explanation/Reference:

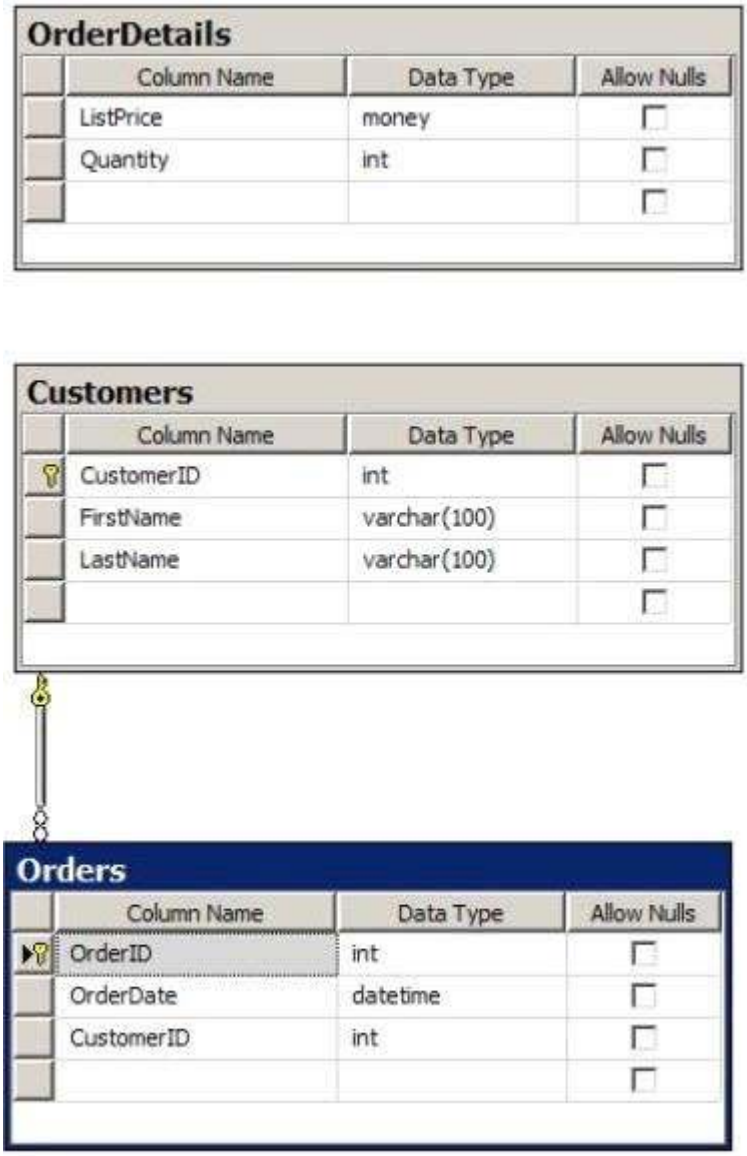
QUESTION 16
You are developing a database application by using Microsoft SQL Server 2012. You have a query that runs slower than expected. You need to capture execution plans that will include detailed information on missing indexes recommended by the query optimizer. What should you do?

A. Add a HASH hint to the query.
B. Add a LOOP hint to the query.
C. Add a FORCESEEK hint to the query.
D. Add an INCLUDE clause to the index.
E. Add a FORCESCAN hint to the Attach query.
F. Add a columnstore index to cover the query.
G. Enable the optimize for ad hoc workloads option.
H. Cover the unique clustered index with a columnstore index.
I. Include a SET FORCEPLAN ON statement before you run the query.
J. Include a SET STATISTICS PROFILE ON statement before you run the query.
K. Include a SET STATISTICS SHOWPLAN_XML ON statement before you run the query.
L. Include a SET TRANSACTION ISOLATION LEVEL REPEATABLE READ statement before you run the query.
M. Include a SET TRANSACTION ISOLATION LEVEL SNAPSHOT statement before you run the query.
N. Include a SET TRANSACTION ISOLATION LEVEL SERIALIZABLE statement before you run the query.

Correct Answer: K
Section: (none)
Explanation

Explanation/Reference:

QUESTION 17
You have a database that contains the tables as shown below:



You have a stored procedure named Procedure1. Procedure1 retrieves all order ids after a specific date. The rows for Procedure1 are not sorted. Procedure1 has a single parameter named Parameter1. Parameter1 uses the varchar type and is configured to pass the specific date to Procedure1. A database administrator discovers that OrderDate is not being compared correctly to Parameter1 after the data type of the column is changed to datetime. You need to update the SELECT statement to meet the following requirements:

- The code must NOT use aliases.
- The code must NOT use object delimiters.
- The objects called in Procedure1 must be able to be resolved by all users.
- OrderDate must be compared to Parameter1 after the data type of Parameter1 is changed to datetime.

Which SELECT statement should you use?
To answer, type the correct code in the answer area.

A.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

```
SELECT Orders.OrderID
FROM Orders
WHERE Orders.OrderDate>CONVERT(datetime,@Parameter1)
```

QUESTION 18
You use Microsoft SQL Server 2012 database to develop a shopping cart application. You need to invoke a table-valued function for each row returned by a query. Which Transact-SQL operator should you use?

A. CROSS JOIN
B. UNPIVOT
C. PIVOT
D. CROSS APPLY

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct.

Reference: http://msdn.microsoft.com/en-us/library/ms175156.aspx

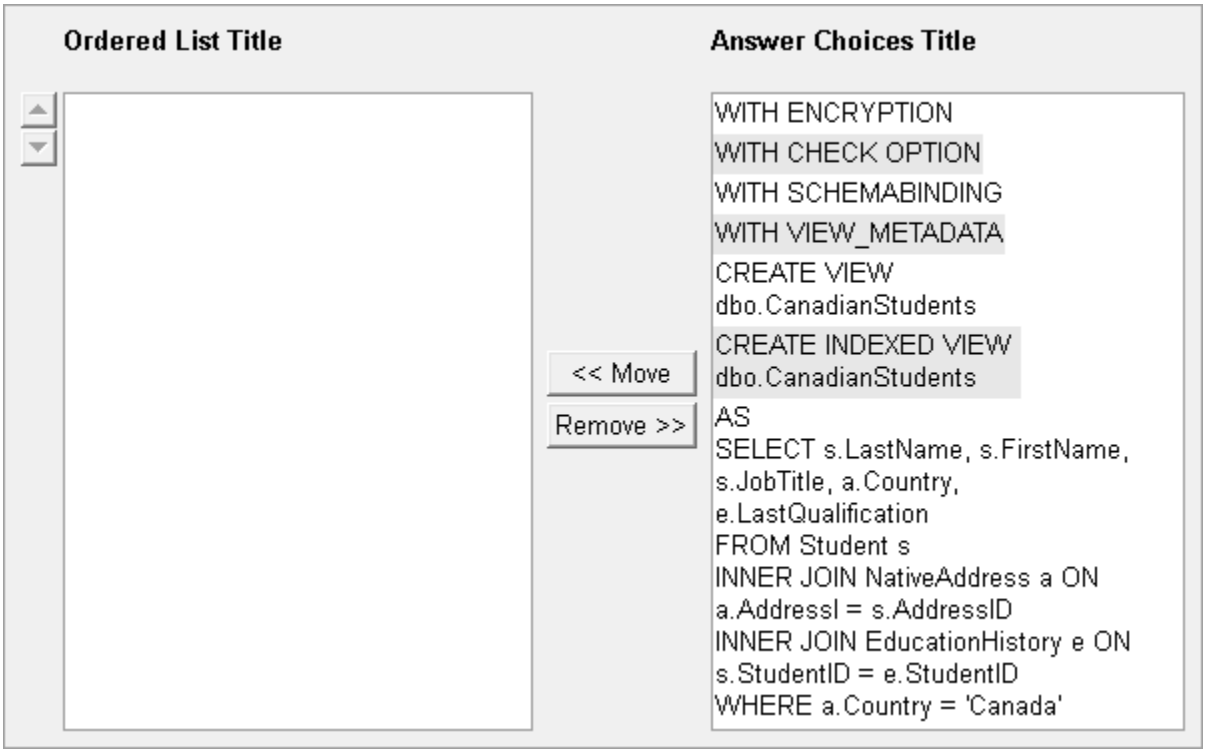
Drag&Drop Questions

QUESTION 1
You develop a database application for a university. You need to create a view that will be indexed that meets the following requirements:

- Displays the details of only students from Canada.
- Allows insertion of details of only students from Canada.

Which four Transact-SQL statements should you use? (To answer, move the appropriate SQL statements from the list of statements to the answer area and arrange them in the correct order.)

Build List and Reorder:



Correct Answer:

```
CREATE VIEW dbo.CanadianStudents
WITH SCHEMABINDING
AS
SELECT s.LastName, s.FirstName, s.JobTitle,
a.Country, e.LastQualification
FROM Student s
INNER JOIN NativeAddress a ON a.AddressI =
s.AddressID
INNER JOIN EducationHistory e ON
s.StudentID = e.StudentID
WHERE a.Country = 'Canada'
WITH CHECK OPTION
```

Section: (none)
Explanation

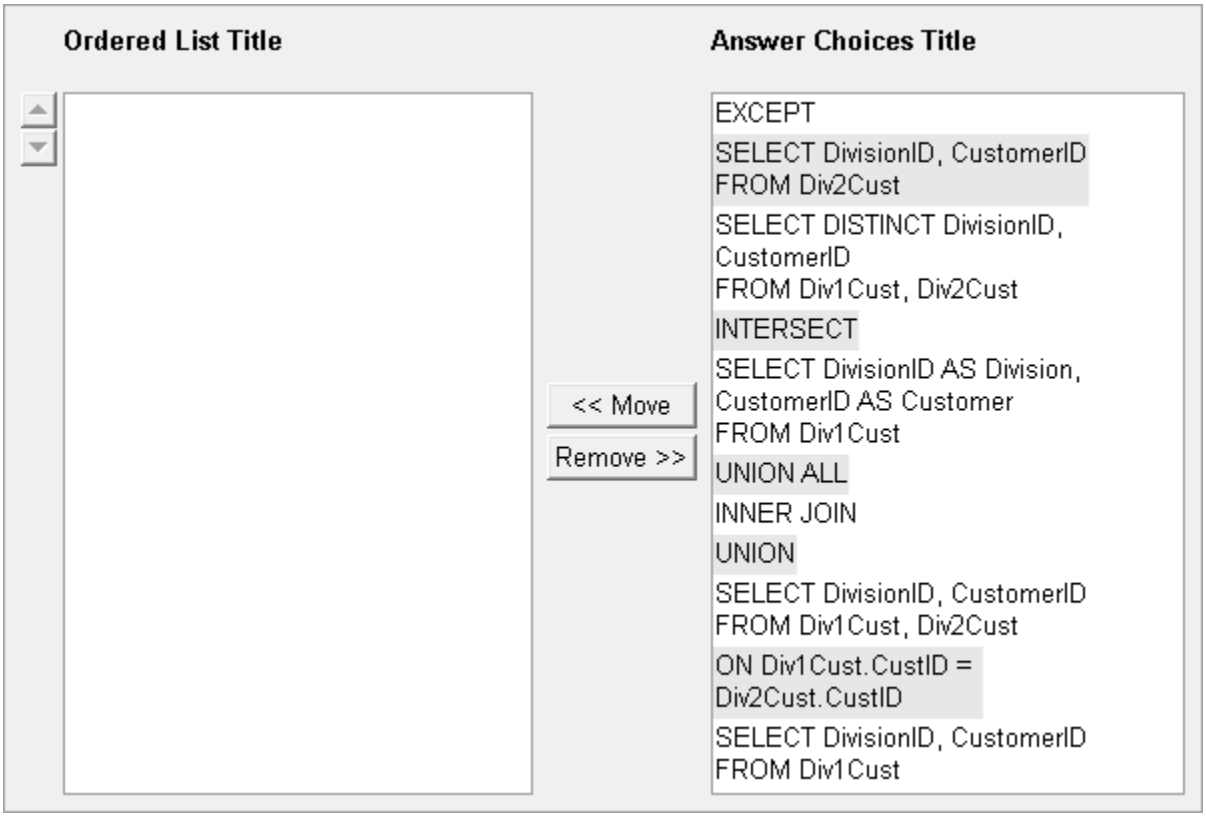
Explanation/Reference:
Verified answer as correct.

Reference: http://msdn.microsoft.com/en-us/library/ms187956.aspx

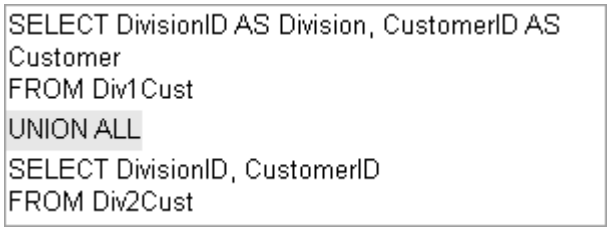
QUESTION 2
You use Microsoft SQL Server 2012 to develop a database that has two tables named Div1Cust and Div2Cust. Each table has columns named DivisionID and CustomerId . None of the rows in Div1Cust exist in Div2Cust.
You need to write a query that meets the following requirements:
- The rows in Div1Cust must be combined with the rows in Div2Cust.
- The result set must have columns named Division and Customer.
- Duplicates must be retained.

Which three Transact-SQL statements should you use? (To answer, move the appropriate statements from the list of statements to the answer area and arrange them in the correct order.)

Build List and Reorder:



Correct Answer:



Section: (none)
Explanation

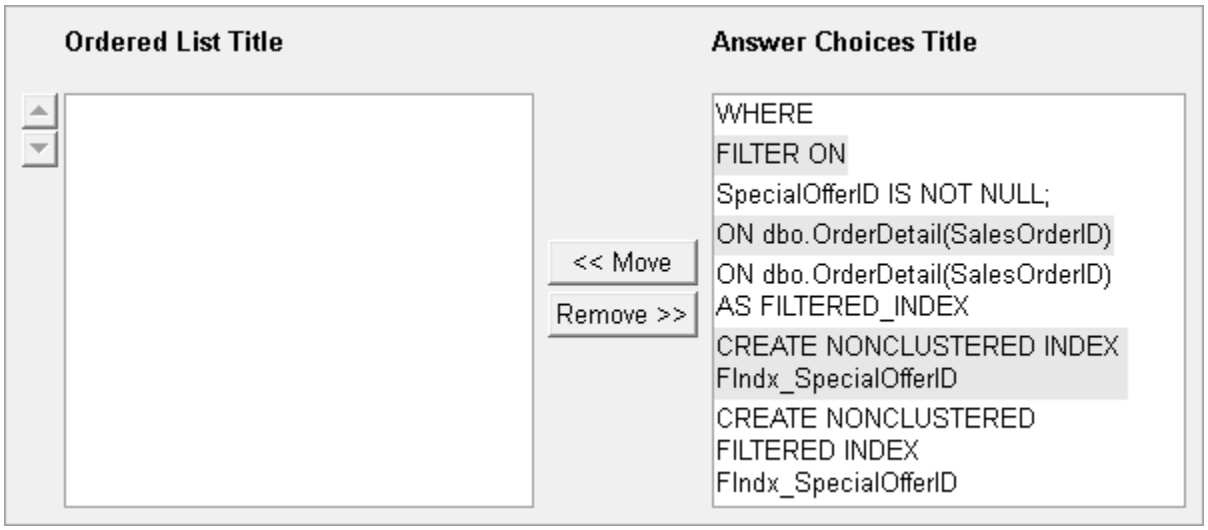
Explanation/Reference:
Reference: http://msdn.microsoft.com/en-us/library/ms180026.aspx
Reference: http://msdn.microsoft.com/en-us/library/ms188055.aspx

QUESTION 3
You administer a Microsoft SQL Server 2012 database. You use an OrderDetail table that has the following definition:

```
CREATE TABLE [dbo].[OrderDetail]
 ([SalesOrderID] [int] NOT NULL,
  [SalesOrderDetailID] [int] IDENTITY(1,1) NOT NULL,
  [CarrierTrackingNumber] [nvarchar](25) NULL,
  [OrderQty] [smallint] NOT NULL,
  [ProductID] [int] NOT NULL,
  [SpecialOfferID] [int] NULL,
  [UnitPrice] [money] NOT NULL);
```

You need to create a non-clustered index on the SalesOrderID column in the OrderDetail table to include only rows that contain a value in the SpecialOfferID column. Which four Transact-SQL statements should you use? (To answer, move the appropriate statements from the list of statements to the answer area and arrange them in the correct order.)

Build List and Reorder:



Correct Answer:

CREATE NONCLUSTERED INDEX FIndx_SpecialOfferID
ON dbo.OrderDetail(SalesOrderID)
WHERE
SpecialOfferID IS NOT NULL;

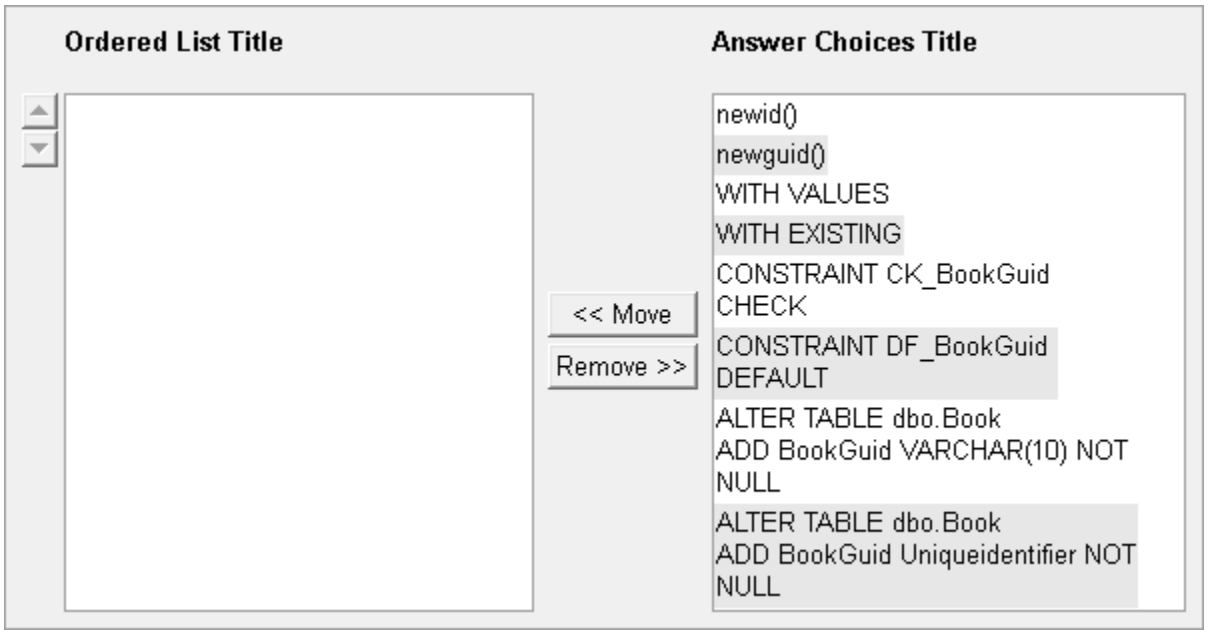
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
You want to add a new GUID column named BookGUID to a table named dbo.Book that already contains data. BookGUID will have a constraint to ensure that it always has a value when new rows are inserted into dbo.Book. You need to ensure that the new column is assigned a GUID for existing rows. Which four Transact-

SQL statements should you use? (To answer, move the appropriate SQL statements from the list of statements to the answer area and arrange them in the correct order.)

Build List and Reorder:



Correct Answer:

ALTER TABLE dbo.Book
ADD BookGuid Uniqueidentifier NOT NULL
CONSTRAINT DF_BookGuid DEFAULT
newid()
WITH VALUES

Section: (none)
Explanation

Explanation/Reference:
Verified answer as correct. Actually, in the real world, you don't have to use WITH VALUES at the end of the statement and it works just as well. But because the question specifically states which FOUR TSQL statements to use, we have to include it.

Reference: http://msdn.microsoft.com/en-us/library/ms190273.aspx