

70-461

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Exam Code: 70-461

Querying Microsoft SQL Server 2012/2014 update 2018

Exam A

QUESTION 1

Your database contains a table named SalesOrders. The table includes a DATETIME column named OrderTime that stores the date and time each order is placed. There is a non-clustered index on the OrderTime column. The business team wants a report that displays the total number of orders placed on the current day. You need to write a query that will return the correct results in the most efficient manner. Which Transact-SQL query should you use?

- A. `SELECT COUNT (*) FROM SaLeaOrders
WHERE OrderTime = CONVERT(DATE, GETDATE ())`
- B. `SELECT COUNT(*) FROM SalesOrders
WHERE OrderTime = GETDATE()`
- C. `SELECT COUNT(-) FROM SaLesCrdrs
WHERE CONVERT(VARCHAR, OrderTime, 112) =
CONVERT (VARCHAR, GETDATE(1, 112))`
- D. `SELECT CCOUNT(*) FROM SalesCrder3
WHERE CrderTime >= CONVERT(DATE, GETDATE())
AND CrderTime < DATEADD(DAY, CONVERT(DATS, GETDATE()))`

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation:

Two answers will return the correct results: the "WHERE CONVERT..." and "WHERE ... AND ..." answers. The correct answer for Microsoft would be the answer that is most "efficient". Anybody have a clue as to which is most efficient? In the execution plan, the one that I've selected as the correct answer is the query with the shortest duration. Also, the query answer with "WHERE CONVERT..." threw warnings in the execution plan... something about affecting CardinalityEstimate and SeekPlan. I also found this article, which leads me to believe that I have the correct answer.

<http://technet.microsoft.com/en-us/library/ms181034.aspx>

QUESTION 2

You administer a Microsoft SQL Server 2012 database named ContosoDb. The database contains a table named Suppliers and a column named IsActive in the Purchases schema. You create a new user named ContosoUser in ContosoDb. ContosoUser has no permissions to the Suppliers table. You need to ensure that ContosoUser can delete rows that are not active from Suppliers. You also need to grant ContosoUser only the minimum required permissions. Which Transact-SQL statement should you use?

- A. `GRANT DELETE ON
Purchases.Suppliers TO ContosoUser`
- B. `CREATE PROCEDURE
Purchases.PurgelnactiveSuppliers
WITH EXECUTE AS USER = 'dbo'
AS
DELETE FROM Purchases.Suppliers
WHERE IsActive = 0
GO GRANT EXECUTE ON
Purchases.PurgelnactiveSuppliers TO ContosoUser`
- C. `GRANT SELECT ON
Purchases.Suppliers TO ContosoUser`
- D. `CREATE PROCEDURE
Purchases.PurgelnactiveSuppliers
AS
DELETE FROM Purchases.Suppliers
WHERE IsActive = 0`

```
GO
GRANT EXECUTE ON
Purchases.PurgeInactiveSuppliers TO ContosoUser
```

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation:

Incorrect syntax near the keyword `USER' in option B.

<http://msdn.microsoft.com/en-us/library/ms188354.aspx>

<http://msdn.microsoft.com/en-us/library/ms187926.aspx>

QUESTION 3

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 4

You are a database developer for an application hosted on a Microsoft SQL Server 2012 server. The database contains two tables that have the following definitions:

```
CREATE TABLE Customer
(CustomerID int NOT NULL PRIMARY KEY,
 CustomerName varchar(50) NOT NULL)
```

```
CREATE TABLE Orders
(OrderID int NOT NULL PRIMARY KEY,
 CustomerID int NOT NULL FOREIGN KEY REFERENCES Customer (CustomerID),
 OrderAmount money NOT NULL,
 ShippingCountry varchar(50) NOT NULL)
```

Global customers place orders from several countries. You need to view the country from which each customer has placed the most orders. Which Transact-SQL query do you use?

- A.

```
SELECT c.CustomerID, c.CustomerName, o.ShippingCountry
FROM Customer c
INNER JOIN
(SELECT CustomerID, ShippingCountry,
RANK() OVER (PARTITION BY CustomerID
ORDER BY COUNT(OrderAmount) DESC) AS Rnk
FROM Orders
GROUP BY CustomerID, ShippingCountry) AS o
ON c.CustomerID = o.CustomerID
WHERE o.Rnk = 1
```
- B.

```
SELECT CustomerID, CustomerName, ShippingCountry
FROM
(SELECT c.CustomerID, c.CustomerName, o.ShippingCountry,
RANK() OVER (PARTITION BY c.CustomerID
ORDER BY COUNT(o.OrderAmount) ASC) AS Rnk
FROM Customer c
INNER JOIN Orders o
ON c.CustomerID = o.CustomerID
GROUP BY c.CustomerID, c.CustomerName,
o.ShippingCountry) cs
WHERE Rnk = 1
```
- C.

```
SELECT c.CustomerID, c.CustomerName, o.ShippingCountry
FROM Customer c
INNER JOIN
(SELECT CustomerID, ShippingCountry,
RANK() OVER (PARTITION BY CustomerID
ORDER BY OrderAmount DESC) AS Rnk
FROM Orders
GROUP BY CustomerID, ShippingCountry) AS o
ON c.CustomerID = o.CustomerID
WHERE o.Rnk = 1
```
- D.

```
SELECT c.CustomerID, c.CustomerName, o.ShippingCountry
FROM Customer c
INNER JOIN
(SELECT CustomerID, ShippingCountry,
COUNT(OrderAmount) AS OrderAmount
FROM Orders
GROUP BY CustomerID, ShippingCountry) AS o
ON c.CustomerID = o.CustomerID
ORDER BY OrderAmount DESC
```

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 5

You use Microsoft SQL Server 2012 to develop a database application. You need to implement a computed column that references a lookup table by using an INNER JOIN against another table. What should you do?

- A. Reference a user-defined function within the computed column.
- B. Create a BEFORE trigger that maintains the state of the computed column.
- C. Add a default constraint to the computed column that implements hard-coded values.
- D. Add a default constraint to the computed column that implements hard-coded CASE statements.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 6

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:

Explanation:

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

QUESTION 7

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

- Status information must be logged to a status table.
- If the status table does not exist at the beginning of the batch, it must be created.

Which object should you use?

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation:

<http://msdn.microsoft.com/en-us/library/ms186755.aspx>

QUESTION 8

You develop a Microsoft SQL Server 2012 database that contains tables named Customers and Orders. The tables are related by a column named CustomerId. You need to create a query that meets the following requirements:

- Returns the CustomerName for all customers and the OrderDate for any orders that they have placed.
- Results must not include customers who have not placed any orders.

Which Transact-SQL query should you use?

- A.

```
SELECT CustomerName, OrderDate
FROM Customers LEFT OUTER JOIN Orders
ON Customers.CustomerID = Orders.CustomerId
```
- B.

```
SELECT CustomerName, OrderDate
FROM Customers RIGHT OUTER JOIN Orders
ON Customers.CustomerID = Orders.CustomerId
```
- C.

```
SELECT CustomerName, OrderDate
FROM Customers CROSS JOIN Orders
ON Customers.CustomerId = Orders.CustomerId
```
- D.

```
SELECT CustomerName, OrderDate
FROM Customers JOIN Orders
ON Customers.CustomerId = Orders.CustomerId
```

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation:

<http://msdn.microsoft.com/en-us/library/ms177634.aspx>

QUESTION 9

DRAG DROP

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.)

Select and Place:

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

Correct Answer:

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

Section: (none)

Explanation

Explanation/Reference:

Explanation:

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

QUESTION 10

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:

Explanation:

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

QUESTION 11

CORRECT TEXT

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

OrderDetails			
	Column Name	Data Type	Allow Nulls
	ListPrice	money	<input type="checkbox"/>
	Quantity	int	<input type="checkbox"/>
			<input type="checkbox"/>

Customers			
	Column Name	Data Type	Allow Nulls
	CustomerID	int	<input type="checkbox"/>
	FirstName	varchar(100)	<input type="checkbox"/>
	LastName	varchar(100)	<input type="checkbox"/>
			<input type="checkbox"/>

Orders			
	Column Name	Data Type	Allow Nulls
	OrderID	int	<input type="checkbox"/>
	OrderDate	datetime	<input type="checkbox"/>
	CustomerID	int	<input type="checkbox"/>
			<input type="checkbox"/>

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.

Answer: Please review the explanation part for this answer

Correct Answer: Please review the explanation part for this answer

Section: (none)

Explanation

Explanation/Reference:

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

QUESTION 12

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 a large amount of memory is consumed by single-use dynamic

queries. You need to reduce procedure cache usage from these statements without creating any additional indexes. 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: G

Section: (none)

Explanation

Explanation/Reference:

Explanation:

<http://msdn.microsoft.com/en-us/library/cc645587.aspx>

QUESTION 13

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: