# ➢ Vendor: Microsoft

# ➢ Exam Code: 70-483

# ➢ Exam Name: Microsoft Programming in C#

# ➢ Question 31 -- Question 60



**QUESTION 31**

You are developing a C# application that has a requirement to validate some string input data by using the Regex class. The application includes a method named ContainsHyperlink. The ContainsHyperlink() method will verify the presence of a URI and surrounding markup. The following code segment defines the ContainsHyperlink() method. (Line numbers are included for reference only.)

```
01 bool ContainsHyperlink(string inputData)
02 {
03    string regExPattern = "href\\s*=\\s*(?:\"(?<1>[^\"]*)\"|(?<1>\\S+))";
04
05    return evaluator.IsMatch(inputData);
06 }
```

The expression patterns used for each validation function are constant.
You need to ensure that the expression syntax is evaluated only once when the Regex object is initially instantiated.
Which code segment should you insert at line 04?

A.
```
var evaluator = new Regex(regExPattern, RegexOptions.CultureInvariant);
```

B.
```
var evaluator = new Regex(inputData);
```

C.
```
var assemblyName = "Validation";
var compilationInfo = new RegexCompilationInfo(inputData, RegexOptions.IgnoreCase, "Href", assemblyName,
true);
Regex.CompileToAssembly(new[] { compilationInfo }, new AssemblyName(assemblyName));
var evaluator = new Regex(regExPattern, RegexOptions.CultureInvariant);
```

D.
```
var evaluator = new Regex(regExPattern, RegexOptions.Compiled);
```

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

**Answer:** D

**QUESTION 32**
You are developing an application by using C#.
You have the following requirements:
- Support 32-bit and 64-bit system configurations.
- Include pre-processor directives that are specific to the system configuration.
- Deploy an application version that includes both system configurations to testers.
- Ensure that stack traces include accurate line numbers.

You need to configure the project to avoid changing individual configuration settings every time you deploy the application to testers.
Which two actions should you perform?
(Each correct answer presents part of the solution. Choose two.)

A. Update the platform target and conditional compilation symbols for each application configuration.
B. Create two application configurations based on the default Release configuration.
C. Optimize the application through address rebasing in the 64-bit configuration.
D. Create two application configurations based on the default Debug configuration.

**Answer:** BD

**QUESTION 33**
You are developing a method named CreateCounters that will create performance counters for an application. The method includes the following code. (Line numbers are included for reference only.)

```
01 void CreateCounters()
02 {
03   if (!PerformanceCounterCategory.Exists("Contoso"))
04   {
05     var counters = new CounterCreationDataCollection();
06     var ccdCounter1 = new CounterCreationData
07     {
08       CounterName = "Counter1",
09       CounterType = PerformanceCounterType.AverageTimer32
11     };
12     counters.Add(ccdCounter1);
13     var ccdCounter2 = new CounterCreationData
14     {
15       CounterName = "Counter2",
16
17     };
18     counters.Add(ccdCounter2);
19     PerformanceCounterCategory.Create("Contoso", "Help string",
20      PerformanceCounterCategoryType.MultiInstance, counters);
21   }
22 }
```

You need to ensure that Counter2 is available for use in Windows Performance Monitor (PerfMon).
Which code segment should you insert at line 16?

A. CounterType = PerformanccCounterType.RawBase
B. CounterType = PerformanceCounterType.AverageBase
C. CounterType = PerformanceCounterType.SampleBase

D. CounterType = PerformanceCounterType.CounterMultiBase

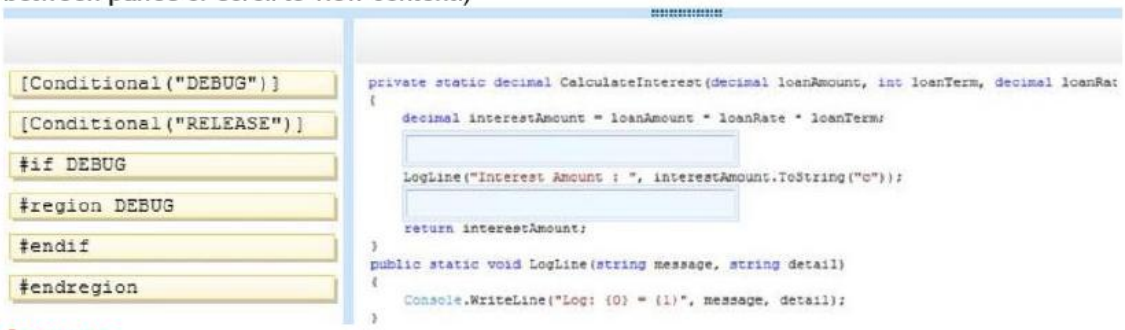
**Answer:** D

**QUESTION 34**
You are developing an application that will transmit large amounts of data between a client computer and a server.
You need to ensure the validity of the data by using a cryptographic hashing algorithm.
Which algorithm should you use?

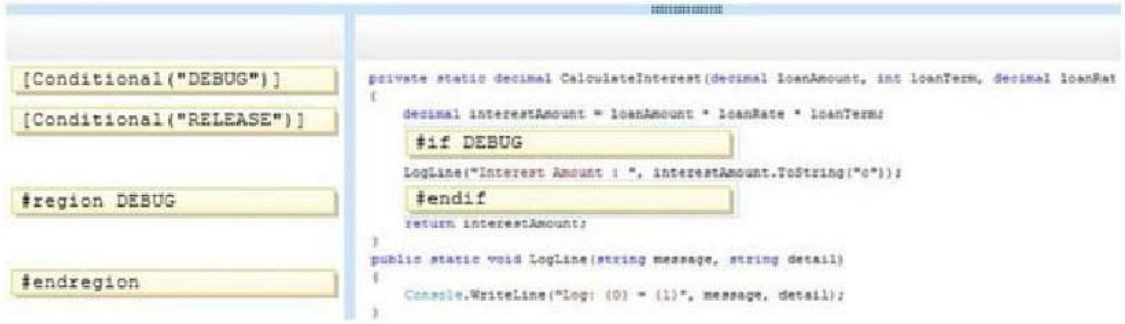
A. HMACSHA256
B. RNGCryptoServiceProvider
C. DES
D. Aes

**Answer:** A

**QUESTION 35**
Drag and Drop Question
You are testing an application. The application includes methods named CalculateInterest and LogLine. The CalculateInterest () method calculates loan interest. The Logl_ine() method sends diagnostic messages to a console window.
You have the following requirements:
- The CalculateInterest() method must run for all build configurations.
- Logl_ine() method must run only for debug builds.
You need to ensure that the methods run correctly.
How should you complete the relevant code?
(To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)




**Answer:**



**QUESTION 36**
You are developing an assembly that will be used by multiple applications.
You need to install the assembly in the Global Assembly Cache (GAC).
Which two actions can you perform to achieve this goal?
(Each correct answer presents a complete solution. Choose two.)

A. Use the Assembly Registration tool (regasm.exe) to register the assembly and to copy the assembly to the GAC.
B. Use the Strong Name tool (sn.exe) to copy the assembly into the GAC.
C. Use Microsoft Register Server (regsvr32.exe) to add the assembly to the GAC.
D. Use the Global Assembly Cache tool (gacutil.exe) to add the assembly to the GAC.
E. Use Windows Installer 2.0 to add the assembly to the GAC.

**Answer:** BD

**QUESTION 37**
You are debugging an application that calculates loan interest. The application includes the following code. (Line numbers are included for reference only.)

```
01 private static decimal CalculateInterest(decimal loanAmount, int loanTerm, decimal loanRate)
02 {
03
04   decimal interestAmount = loanAmount * loanRate * loanTerm;
05
06   return interestAmount;
07 }
```

You need to ensure that the debugger breaks execution within the CalculateInterest() method when the loanAmount variable is less than or equal to zero in all builds of the application.
What should you do?

A. Insert the following code segment at line 03:
Trace.Assert(loanAmount > 0);
B. Insert the following code segment at line 03:
Debug.Assert(loanAmount > 0);
C. Insert the following code segment at line 05:
Debug.Write(loanAmount > 0);
D. Insert the following code segment at line 05:
Trace.Write(loanAmount > 0);

**Answer:** A

**QUESTION 38**
You are developing an application that accepts the input of dates from the user. Users enter the date in their local format. The date entered by the user is stored in a string variable named inputDate.
The valid date value must be placed in a DateTime variable named validatedDate.
You need to validate the entered date and convert it to Coordinated Universal Time (UTC).
The code must not cause an exception to be thrown.
Which code segment should you use?

A.
```
bool validDate = DateTime.TryParse(inputDate,
 CultureInfo.CurrentCulture, DateTimeStyles.AdjustToUniversal | DateTimeStyles.AssumeLocal,
out validatedDate);
```

B.
```
bool validDate = DateTime.TryParse(inputDate,
 CultureInfo.CurrentCulture, DateTimeStyles.AssumeUniversal, out validatedDate);
```

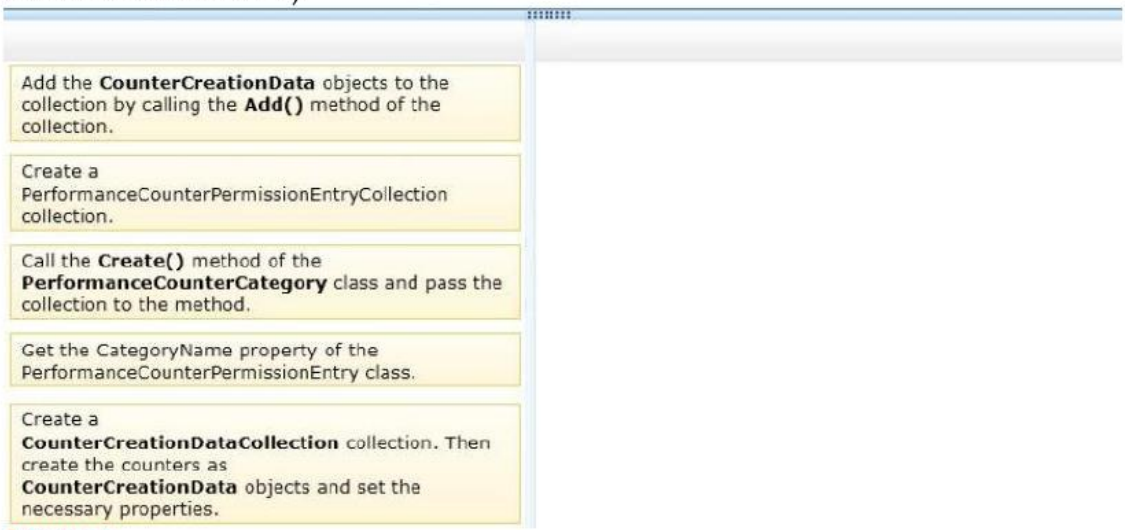
C.
```
bool validDate = true;
try
{
  validatedDate = DateTime.Parse(inputDate);
}
catch
{
  validDate = false;
}
```

D.
```
validatedDate = DateTime.ParseExact(inputDate, "g",
 CultureInfo.CurrentCulture, DateTimeStyles.AdjustToUniversal | DateTimeStyles.AssumeUniversal);
```

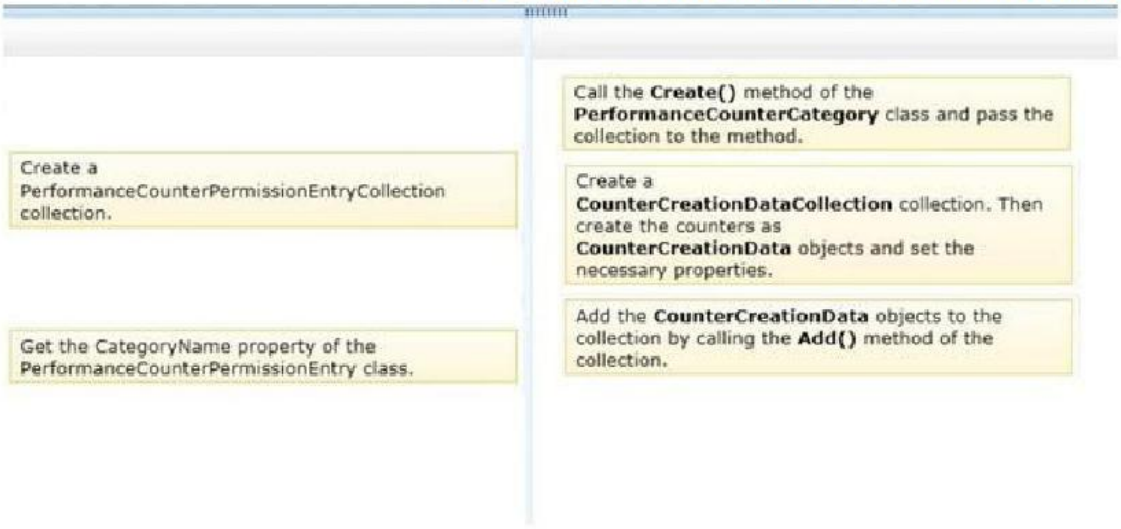
A. Option A
B. Option B
C. Option C
D. Option D

**Answer:** A
**Explanation:**
AdjustToUniversal parses s and, if necessary, converts it to UTC. Note: The DateTime.TryParse method converts the specified string representation of a date and time to its DateTime equivalent using the specified culture-specific format information and formatting style, and returns a value that indicates whether the conversion succeeded.

**QUESTION 39**
Drag and Drop Question
You are developing an application by using C#. The application will process several objects per second.
You need to create a performance counter to analyze the object processing.
Which three actions should you perform in sequence?
(To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)




**Answer:**




**QUESTION 40**
You are developing an application by using C#.
You provide a public key to the development team during development.
You need to specify that the assembly is not fully signed when it is built.
Which two assembly attributes should you include in the source code?
(Each correct answer presents part of the solution. Choose two.)

A. AssemblyKeyNameAttribute
B. ObfuscateAssemblyAttribute
C. AssemblyDelaySignAttribute
D. AssemblyKeyFileAttribute

**Answer:** CD

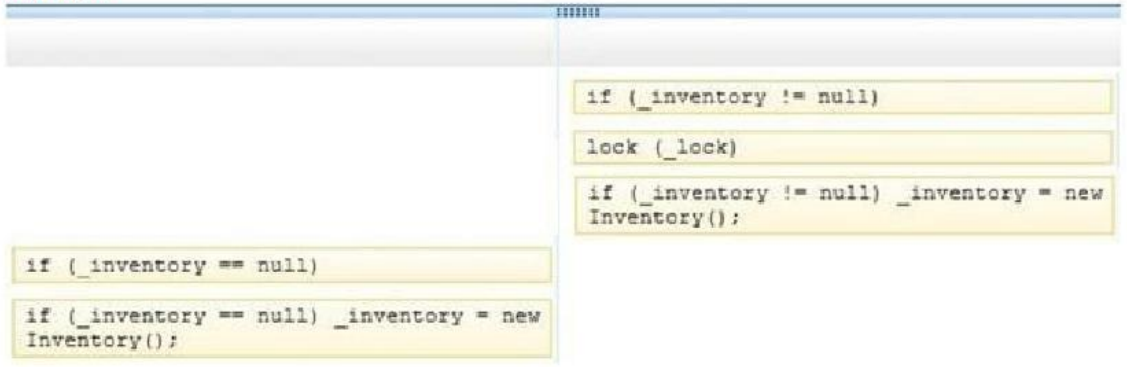
**QUESTION 41**
Drag and Drop Question
You are developing an application that includes a class named Warehouse. The Warehouse class includes a static property named Inventory- The Warehouse class is defined by the following code segment. (Line numbers are included for reference only.)

```
01 public class Warehouse
02 {
03    static Inventory _inventory = null;
04    static object _lock = new object();
05    public static Inventory Inventory
06    {
07      get
08      {
09
10        return _inventory;
11      }
12    }
13 }
```

You have the following requirements:
- Initialize the _inventory field to an Inventory instance.
- Initialize the _inventory field only once.
- Ensure that the application code acquires a lock only when the _inventory object must be instantiated.

You need to meet the requirements.
Which three code segments should you insert in sequence at line 09?
(To answer, move the appropriate code segments from the list of code segments to the answer area and arrange them in the correct order.)


**Answer:**




**QUESTION 42**
You are adding a public method named UpdateGrade to a public class named ReportCard.
The code region that updates the grade field must meet the following requirements:
- It must be accessed by only one thread at a time.
- It must not be vulnerable to a deadlock situation.

You need to implement the UpdateGrade() method. What should you do?

A. Add a private object named **lockObject** to the **ReportCard** class. Place the code region inside the following lock statement:

```
lock (lockObject)
{
  ...
}
```

B. Place the code region inside the following lock statement:

```
lock (this)
{
  ...
}
```

C. Add a public static object named **lockObject** to the **ReportCard** class. Place the code region inside the following lock statement:

```
lock (typeof(ReportCard))
{
  ...
}
```

D. Apply the following attribute to the **UpdateGrade()** method signature:

```
[MethodImpl(MethodImplOptions.Synchronized)]
```

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

**Answer:** A

**QUESTION 43**

You are developing an application that includes a class named BookTracker for tracking library books. The application includes the following code segment. (Line numbers are included for reference only.)

```
01 public delegate void AddBookCallback(int i);
02 public class BookTracker
03 {
04   List<Book> books = new List<Book>();
05   public void AddBook(string name, AddBookCallback callback)
06   {
07     books.Add(new Book(name));
08     callback(books.Count);
09   }
10 }
11
12 public class Runner
13 {
14
15   BookTracker tracker = new BookTracker();
16   public void Add(string name)
17   {
18
19   }
20 }
```

You need to add a user to the BookTracker instance. What should you do?

A. Insert the following code segment at line 14:

```
private static void PrintBookCount(int i)
{
  ...
}
```

Insert the following code segment at line 18:

```
AddBookCallback callback = PrintBookCount;
```

B. Insert the following code segment at line 18:

```
tracker.AddBook(name, delegate(int i)
  {
    ...
  });
```

C. Insert the following code segment at line 11:

```
delegate void AddBookDelegate(BookTracker bookTracker);
```

Insert the following code segment at line 18:

```
AddBookDelegate addDelegate = (bookTracker) =>
  {
    ...
  };
addDelegate(tracker);
```

D. Insert the following code segment at line 11:

```
delegate void AddBookDelegate(string name, AddBookCallback callback);
```

Insert the following code segment at line 18:

```
AddBookDelegate adder = (i, callback) =>
  {
    ...
  };
```

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

**Answer:** B

**QUESTION 44**
Drag and Drop Question

You are implementing a method that creates an instance of a class named User. The User class contains a public event named Renamed. The following code segment defines the Renamed event:

```
Public event EventHandler<RenameEventArgs> Renamed;
```

You need to create an event handler for the Renamed event by using a lambda expression.

How should you complete the relevant code?

(To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

```
user.Renamed -= delegate(object sender, RenamedEventArgs e)
user.Renamed -= (sender, e) =>
user.Renamed += delegate(object sender, RenamedEventArgs e)
user.Renamed += (sender, e) =>
users[0] = user;
users.Add(user);
users.Insert(user);
```

```
List<User> users = new List<User>();

public void AddUser(string name)
{
  User user = new User(name);
  [                                    ]
  {
    Log("User {0} was renamed to {1}", e.OldName, e.Name);
  };
  [                                    ]
}
```

**Answer:**

```
user.Renamed -= delegate(object sender, RenamedEventArgs e)
user.Renamed -= (sender, e) =>
user.Renamed += delegate(object sender, RenamedEventArgs e)

users[0] = user;

users.Insert(user);
List<User> users = new List<User>();

public void AddUser(string name)
{
  User user = new User(name);
  user.Renamed += (sender, e) =>
  {
    Log("User {0} was renamed to {1}", e.OldName, e.Name);
  };
  users.Add(user);
}
```

**QUESTION 45**
You are creating a console application by using C#.
You need to access the assembly found in the file named car.dll.
Which code segment should you use?

A. Assembly.Load ();
B. Assembly.GetExecutJingAssembly() ;
C. this.GetType ();
D. Assembly.LoadFiie("car.dll");

**Answer:** D

**QUESTION 46**
You are developing an application by using C#.
The application includes an object that performs a long running process.
You need to ensure that the garbage collector does not release the object's resources until the process completes.
Which garbage collector method should you use?

A. WaitForFullGCComplete()
B. WaitForFullGCApproach()
C. KeepAlive()
D. WaitForPendingFinalizers()

**Answer:** C
**Explanation:**

The GC.KeepAlive method references the specified object, which makes it ineligible for garbage collection from the start of the current routine to the point where this method is called.
The purpose of the KeepAlive method is to ensure the existence of a reference to an object that is at risk of being prematurely reclaimed by the garbage collector.
The KeepAlive method performs no operation and produces no side effects other than extending the lifetime of the object passed in as a parameter.

**QUESTION 47**
An application includes a class named Person. The Person class includes a method named GetData.
You need to ensure that the GetData() method can be used only by the Person class and not by any class derived from the Person class.
Which access modifier should you use for the GetData() method?

A. Public
B. Protected internal
C. Internal
D. Private
E. Protected

**Answer:** D
**Explanation:**
The GetData() method should be private. It would then only be visible within the Person class.

**QUESTION 48**
You are creating an application that manages information about your company's products. The application includes a class named Product and a method named Save. The Save() method must be strongly typed. It must allow only types inherited from the Product class that use a constructor that accepts no parameters.
You need to implement the Save() method.
Which code segment should you use?

A.
```
public static void Save(Product target)
{
  ...
}
```

B.
```
public static void Save<T>(T target) where T : Product
{
  ...
}
```

C.
```
public static void Save<T>(T target) where T : new()
{
  ...
}
```

D.
```
public static void Save<T>(T target) where T : Product, new()
{
  ...
}
```

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

**Answer:** D

**QUESTION 49**
Drag and Drop Question
You are developing an application by using C#. The application will output the text string "First Line" followed by the text string "Second Line".
You need to ensure that an empty line separates the text strings.
Which four code segments should you use in sequence?
(To answer, move the appropriate code segments to the answer area and arrange them in the correct order.)

```
sb.Append("\1");
var sb = new StringBuilder();
sb.Append("First Line");
sb.Append("\t");
sb.AppendLine();
sb.Append(String.Empty);
sb.Append("Second Line");
```

**Answer:**

```
sb.Append("\1");
var sb = new StringBuilder();
sb.Append("First Line");
sb.Append("\t");
sb.AppendLine();
sb.Append(String.Empty);
sb.Append("Second Line");
```

**QUESTION 50**

You are developing an application. The application includes classes named Mammal and Animal and an interface named IAnimal.

The Mammal class must meet the following requirements:

- It must either inherit from the Animal class or implement the IAnimal interface.
- It must be inheritable by other classes in the application.

You need to ensure that the Mammal class meets the requirements.

Which two code segments can you use to achieve this goal?

(Each correct answer presents a complete solution. Choose two.)

A.
```
abstract class Mammal : IAnimal
{
   ...
}
```

B.
```
sealed class Mammal : IAnimal
{
   ...
}
```

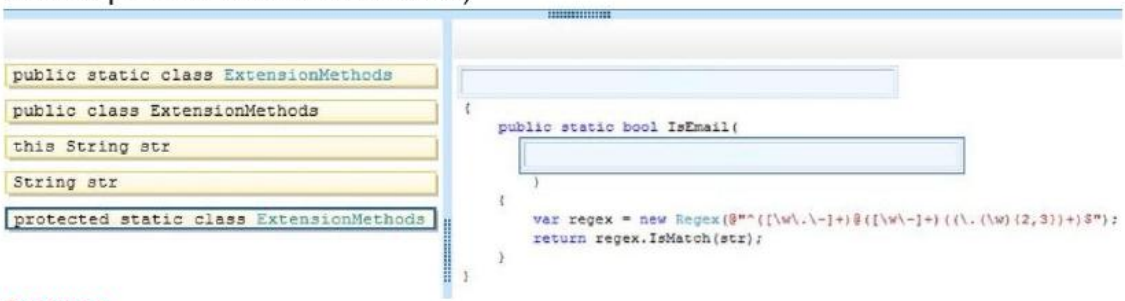
C.
```
abstract class Mammal : Animal
{
   ...
}
```

D.
```
sealed class Mammal : Animal
{
   ...
}
```

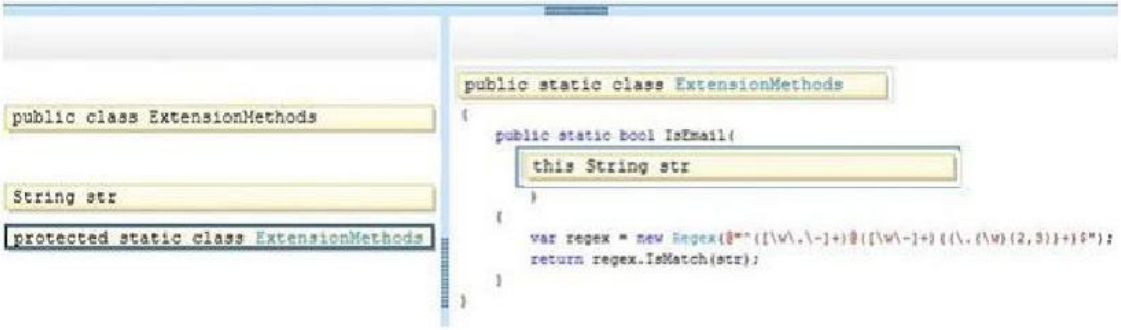
A. Option A
B. Option B
C. Option C
D. Option D

**Answer:** AC

**QUESTION 51**
Drag and Drop Question
You are developing a class named ExtensionMethods.
You need to ensure that the ExtensionMethods class implements the IsEmail() method on string objects.
How should you complete the relevant code?
(To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)




**Answer:**




**QUESTION 52**
You are developing an application by using C#. The application includes the following code segment.
(Line numbers are included for reference only.)

```
01 public interface IDataContainer
02 {
03   string Data { get; set; }
04 }
05 void DoWork(object obj)
06 {
07
08   if (dataContainer != null)
09   {
10     Console.WriteLine(dataContainer.Data);
11   }
12 }
```

The DoWork() method must throw an InvalidCastException exception if the obj object is not of type IDataContainer when accessing the Data property.
You need to meet the requirements.
Which code segment should you insert at line 07?

A. var dataContainer = (IDataContainer) obj;
B. var dataContainer = obj as IBataContamer;
C. var dataContainer = obj is IDataContainer;
D. dynamic dataContainer = obj;

**Answer:** A

**QUESTION 53**
An application receives JSON data in the following format:

```
{ "FirstName" : "David",
  "LastName" : "Jones",
  "Values" : [0, 1, 2] }
```

The application includes the following code segment. (Line numbers are included for reference only.)

```
01 public class Name
02 {
03   public int[] Values { get; set; }
04   public string FirstName { get; set; }
05   public string LastName { get; set; }
06 }
07 public static Name ConvertToName(string json)
08 {
09   var ser = new JavaScriptSerializer();
10
11 }
```

You need to ensure that the ConvertToName() method returns the JSON input string as a Name object.
Which code segment should you insert at line 10?

A. Return ser.Desenalize (json, typeof(Name));
B. Return ser.ConvertToType<Name>(json);
C. Return ser.Deserialize<Name>(json);
D. Return ser .ConvertToType (json, typeof (Name) >

**Answer:** C

**QUESTION 54**
You are developing an application that includes the following code segment. (Line numbers are included for reference only.)

```
01 class Customer
02 {
03   public string CompanyName { get; set; }
04   public string Id { get; set; }
05 }
06 const string sqlSelectCustomers = "SELECT CustomerID, CompanyName FROM Customers";
07 private static IEnumerable<Customer> GetCustomers(string sqlConnectionString)
08 {
09   List<Customer> customers = new List<Customer>();
10   SqlConnection sqlConnection = new SqlConnection(sqlConnectionString);
11   using (sqlConnection)
12   {
13     SqlCommand sqlCommand = new SqlCommand(sqlSelectCustomers, sqlConnection);
14
15     using (SqlDataReader sqlDataReader = sqlCommand.ExecuteReader())
16     {
17
18       {
19         Customer customer = new Customer();
20         customer.Id = (string)sqlDataReader["CustomerID"];
21         customer.CompanyName = (string)sqlDataReader["CompanyName"];
22         customers.Add(customer);
23       }
24     }
25   }
26   return customers;
27 }
```

The GetCustomers() method must meet the following requirements:
- Connect to a Microsoft SQL Server database.
- Populate Customer objects with data from the database.

- Return an IEnumerable<Customer> collection that contains the populated Customer objects.

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

A. Insert the following code segment at line 17:
while (sqlDataReader.GetValues())
B. Insert the following code segment at line 14:
sqlConnection.Open();
C. Insert the following code segment at line 14:
sqlConnection.BeginTransaction();
D. Insert the following code segment at line 17:
while (sqlDataReader.Read())
E. Insert the following code segment at line 17:
while (sqlDataReader.NextResult())

**Answer:** BD
**Explanation:**
sqlConecction.Open in line 14
The SqlConnection.Open method opens a database connection with the property settings specified by the ConnectionString.
while (SqlDataReader.Read()) in line 17
Read the next line until end of file.
The SqlDataReader.Read method Advances the SqlDataReader to the next record.
The value is true if there are more rows; otherwise false.

**QUESTION 55**
Drag and Drop Question
You are developing an application that includes a class named Customer. The application will output the Customer class as a structured XML document by using the following code segment:

```
<?xml version="1.0" encoding="utf-8"?>
<Prospect xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:xsd="http://www.w3.org/2001/XMLSchema"
 ProspectId="9c027bb8-65f1-40a9-8afa-ac839f3cdc5d" xmlns="http://prospect">
  <FullName>David Jones</FullName>
  <DateOfBirth>1977-06-11T00:00:00</DateOfBirth>
</Prospect>
```

You need to ensure that the Customer class will serialize to XML.
How should you complete the relevant code?
(To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

```
[XmlRoot("Customer", Namespace = "http://customer")]
[XmlRoot("Prospect", Namespace = "http://prospect")]
[XmlAttribute("ProspectId")]
[XmlElement("ProspectId")]
[XmlChoiceIdentifier]
[XmlIgnore]
[XmlArrayItem]
[XmlElement("FullName")]
```

```
public class Customer
{
    public Guid Id { get; set; }
    public string Name { get; set; }
    public DateTime DateOfBirth { get; set; }
    public int Tin { get; set; }
}
```

**Answer:**

```
[XmlRoot("Customer", Namespace = "http://customer")]


[XmlElement("ProspectId")]
[XmlChoiceIdentifier]

[XmlArrayItem]
```

```
[XmlRoot("Prospect", Namespace = "http://prospect")]
public class Customer
{
    [XmlAttribute("ProspectId")]
    public Guid Id { get; set; }
    [XmlElement("FullName")]
    public string Name { get; set; }
    public DateTime DateOfBirth { get; set; }
    [XmlIgnore]
    public int Tin { get; set; }
}
```

**QUESTION 56**

An application will upload data by using HTML form-based encoding. The application uses a method named SendMessage. The SendMessage() method includes the following code. (Line numbers are included for reference only.)

```
01 public Task<byte[]> SendMessage(string url, int intA, int intB)
02 {
03   var client = new WebClient();
04
05 }
```

The receiving URL accepts parameters as form-encoded values. You need to send the values intA and intB as form-encoded values named a and b, respectively.
Which code segment should you insert at line 04?

A.
```
var data = string.Format("a={0}&b={1}", intA, intB);
return client.UploadStringTaskAsync(new Uri(url), data);
```

B.
```
var data = string.Format("a={0}&b={1}", intA, intB);
return client.UploadFileTaskAsync(new Uri(url), data);
```

C.
```
var data = string.Format("a={0}&b={1}", intA, intB);
return client.UploadDataTaskAsync(new Uri(url), Encoding.UTF8.GetBytes(data));
```

D.
```
var nvc = new NameValueCollection() { { "a", intA.ToString() }, { "b", intB.ToString() } };
return client.UploadValuesTaskAsync(new Uri(url), nvc);
```

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

**Answer:** D

**QUESTION 57**

You are developing an application. The application converts a Location object to a string by using a method named WriteObject. The WriteObject() method accepts two parameters, a Location object and an XmlObjectSerializer object. The application includes the following code. (Line numbers are included for reference only.)

```
01 public enum Compass
02 {
03   North,
04   South,
05   East,
06   West
07 }
08 [DataContract]
09 public class Location
10 {
11   [DataMember]
12   public string Label { get; set; }
13   [DataMember]
14   public Compass Direction { get; set; }
15 }
16 void DoWork()
17 {
18   var location = new Location { Label = "Test", Direction = Compass.West };
19   Console.WriteLine(WriteObject(location,
20
21   ));
22 }
```

You need to serialize the Location object as XML. Which code segment should you insert at line 20?

A. New XmlSerializer(typeof(Location))
B. New NetDataContractSerializer()
C. New BataContractJsonSerializer {typeof (Location) )
D. New DataContractSerializer(typeof(Location))

**Answer:** D

**QUESTION 58**

You are developing an application that includes the following code segment. (Line numbers are included for reference only.)

```
01 using System;
02 class MainClass
03 {
04   public static void Main(string[] args)
05   {
06     bool bValidInteger = false;
07     int value = 0;
08     do
09     {
10       Console.WriteLine("Enter an integer:");
11       bValidInteger = GetValidInteger(ref value);
12     } while (!bValidInteger);
13     Console.WriteLine("You entered a valid integer, " + value);
14   }
15   public static bool GetValidInteger(ref int val)
16   {
17     string sLine = Console.ReadLine();
18     int number;
19
20     {
21       return false;
22     }
23     else
24     {
25       val = number;
26       return true;
27     }
28   }
29 }
```

You need to ensure that the application accepts only integer input and prompts the user each time non-integer input is entered.
Which code segment should you add at line 19?

A. If (!int.TryParse{sLine, out number))
B. If ((number = Int32.Parse(sLine)) = = Single.NaN)
C. If ((number = int.Parse (sLine)) > Int32.MaxValue)
D. If (Int32.TryParse(sLine, out number))

**Answer:** A

**QUESTION 59**

You are developing an application that includes a class named Order. The application will store a collection of Order objects. The collection must meet the following requirements:
- Internally store a key and a value for each collection item.
- Provide objects to Iterators in ascending order based on the key.
- Ensure that item are accessible by zero-based index or by key.

You need to use a collection type that meets the requirements.
Which collection type should you use?

A. LinkedList
B. Queue
C. Array
D. HashTable
E. SortedList

**Answer:** E
**Explanation:**
http://msdn.microsoft.com/en-us/library/system.collections.sortedlist.aspx

**QUESTION 60**
You are debugging an application that calculates loan interest. The application includes the following code. (Line numbers are included for reference only.)

```
01 private static decimal CalculateInterest(decimal loanAmount, int loanTerm, decimal loanRate)
02 {
03
04   decimal interestAmount = loanAmount * loanRate * loanTerm;
05
06   return interestAmount;
07 }
```

You have the following requirements:
- The debugger must break execution within the CalculateInterest() method when the loanAmount variable is less than or equal to zero.
- The release version of the code must not be impacted by any changes.

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

A. Insert the following code segment at tine 05:
Debug.Write(loanAmount > 0);
B. Insert the following code segment at line 05:
Trace.Write(loanAmount > 0);
C. Insert the following code segment at line 03:
Debug.Assert(loanAmount > 0);
D. Insert the following code segment at line 03:
Trace.Assert(loanAmount > 0);

**Answer:** C