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You are creating a .NET Remoting object. You want to add code to the object to log error messages and warning messages. You want the log messages written to both a log file and to the Windows application log.

Which code segment should you use?

```
A. EventLog eventLog = new EventLog("testkobj");
FileStream fileLog = File.Create("testkobj.log";
Trace.WriteLine(eventLog, "sample message");
Trace.WriteLine(fileLog, "sample message");
```

```
B. EventLog eventLog = new EventLog("testkobj");
FileStream fileLog = File.Create("testkobj.log");
Trace.Write(eventLog);
Trace.Write(fileLog);
Trace.WriteLine("sample message");
```

```
C. Trace.Listeners.Add(new
EventLogTraceListener("testkobj"));
Trace.Listeners.Add(
    new TextFileTraceListener("testkobj.log"));
Trace.WriteLine("sample message");
```

Answer: C

Explanation: Listeners direct the tracing output to an appropriate target, such as a log, window, or text file.

An EventLogTraceListener redirects output to an event log. A TextWriterTraceListener redirects output to an instance of the TextWriter class.

We should take care to use the **new EventLogTraceListener("remobj")** constructor.

Note: Any listener in the Listeners collection gets the same messages from the trace output methods. If we set up two listeners: a TextWriterTraceListener and an EventLogTraceListener. Each listener receives the same message. The TextWriterTraceListener would direct its output to a stream, and the EventLogTraceListener would direct its output to an event log.

Reference: Visual Basic and Visual C# Concepts, Trace Listeners .NET Framework Class Library, EventLogTraceListener Class [C#]

Incorrect Answers

- A: The EventLog object provides interaction with Windows event logs and filestreams enables writing of data to files. However, they are not appropriate for logging warning and error messages.
- **B:** The following statements are incorrect.

Trace.Write(eventLog);

Trace.Write(fileLog);

The correct usage is Trace.Write(Parameter), where Parameter is either an Object or a String that should be written.

D: The EventLogTraceListener Constructor() (with no parameter) initializes a new instance of the EventLogTraceListener class without a trace listener.

QUESTION NO: 2

You create a serviced component named SessionDispenser. This computer is in the TestKing.Utilities assembly and is registered in a COM+ server application. SessionDispenser has multiple callers.

You discover that there are logic problems in the Create New Session method. You want to debug any calls to this method.

What should you do?

- A. Open the SessionDispenser solution.
 Set a breakpoint on the CreateNewSession method.
 Start the debugger.
- B. Attach the debugger to the client process.
 Set a breakpoint on the SessionDispenser.CreateNewSession method.
- C. Attach the debugger to the TestKing.Utilites.exe process. Set a breakpoint on the CreateNewSession method.
- D. Attach the debugger to a Dllhost.exe process. Set a breakpoint on the CreateNewSession method.

Answer: C

Explanation: We should attach the debugger to the COM+ server application, the TestKing.Utilities.exe process.

Note: The Visual Studio debugger has the ability to attach to a program that is running in a process outside of Visual Studio. Once you have attached to a program, you can use debugger execution commands, inspect the program state, settings breakpoints, etc.

Reference: Visual Studio, Attaching to a Running Program or Multiple Programs

Incorrect Answers

- A: The debugger must be attached to the program that should be debugged.
- **B:** The debugger should be attached to SessionDispenser component, not to the client process.

D: Dllhost.exe can be useful when debugging a Web server.

QUESTION NO: 3

You create an XML Web service named LatLong that converts street addresses to latitude and longitude coordinates. TestKing Inc. charges for this service and allows only existing customers to use the service.

If a customer ID is not passed as part of a SOAP header, you want the service to refuse the request. You want these service refusal messages to be logged to an event log named LatLongLog. You anticipate that there will be a lot of these log entries over time. A string object named refusalMessage contains the message to log.

Which code segment should you use?

```
A. Event log = new EventLog("LatLongLog");
  log.WriteEntry(refusalMessage, EventLogEntryType.Error);
B. EventLog log = new EventLog();
  log.Source = "LatLongLog";
  log.WriteEntry(refusalMessage, EventLogEntryType.Error);
C. if (!EventLog.SourceExists("LatLongSource")) {
     EventLog.CreateEventSource("LatLongSource",
       "LatLongLog");
  }
  EventLog.WriteEntry("LatLongSource",
     refusalMessage, EventLogEntryType.Error);
D. if (!EventLog.SourceExists("LatLongSource")) {
     EventLog.CreateEventSource("LatLongSource",
       "LatLongLog";
  }
  EventLog log = new EventLog("LatLongLog");
  log.WriteEntry(refusalMessage, EventLogEntryType.Error);
```

Answer: C

Explanation: First we use the SourcesExists method to search the registry for an existing event source. If it does not exists we create a new.

Note: The EventLog.CreateEventSource method establishes an application, using the specified Source, as a valid event source for writing entries to a log on the local computer. This method can also create a new custom log on the local computer.

Reference: .NET Framework Class Library, EventLog Members

Incorrect Answers

A, B, D: We should only create a new event source only if it does not exist.

You create a serviced component named TestKingOrderProcessor. OrderProcessor implements the IOrderinit interface. The component and the interface contain the following code segments:

```
[Guid("0B6ABB29-43D6-40a6-B5F2-83A457D062AC")]
[InterfaceType(ComInterfaceType.InterfaceIsDual)]
public interface IOrderInit {
    // IOrderInit methods go here.
}
public class OrderProcessor: ServicedComponent, IOrderInit {
    // OrderProcessor methods go here.
}
```

You discover that every time you rebuild TestKingOrderProcessor, existing unmanaged client code fails. The HRESULT for the exception is 0x80040154. The exception includes the following message: "Class not registered". You need to resolve this problem.

What should you do?

- A. Add a Guid attribute to the TestKingOrderProcessor class.
- B. Add a ComImport attribute to the IOrderInit interface.
- C. To the TestKingOrderProcessor class, add the following attribute: [ClassInterface(ClassInterfaceType.AutoDual)]
- D. To the end of every method, add the following line of code: Marshal.ReleaseComObject(this);

Answer: A

Explanation: You can identify an existing COM+ target application by name or GUID. We can register the TestKingOrderProcessor class by adding a GUID attribute to it.

Reference: NET Framework Developer's Guide, Registering Serviced Components [C#]

Incorrect Answers

- **B:** When placed on a class, the ComImport attribute marks the class as an externally implemented Com class. However, the class must also be decorated with the Guid attribute, which specifies the CLSID for the COM class being imported.
- **C:** The ClassInterfaceType.AutoDual method indicates that the class only supports late binding for COM clients.
- **D:** The Marshal.ReleaseComObject method decrements the reference count of the supplied runtime callable wrapper (RCW). It is not of any use in this scenario.

You create an XML Web service named PostalCode. Your project source includes a code-behind file and a file named PostalCode.asmx.

During implementation, you use the Debug class to record debugging log messages, to verify values, and to report debugging failures.

You want to deploy PostalCode to a production computer. You do not want any of the debugging code to execute on the production computer.

What should you do?

- A. Set the project's active configuration to Release and rebuild the DLL.
- B. Modify the trace element of the Web.config file by setting the enabled attribute to "false".
- C. Modify the compilation element of the Web.config file by setting the debug attribute to **"false"**.
- D. Add code to the constructor of the PostalCode class to set the AutoFlash property of the Debug class to **false**.
- E. Add code to the constructor of the PostalCode class to call the Clear method of the Debug.Listeners property.

Answer: C

Explanation: To set debug mode for an ASP.NET application, you must edit the application's Web.config configuration file.

Reference: Visual Studio, Debug Mode in ASP.NET Applications

QUESTION NO: 6

You create an XML Web service named TimeTKService. Each time TimeTKService is started, it checks for the existence of an event log named TimeTKServiceLog. If TimeServiceLog does not exist, TimeTKService creates it.

You discover that when TimeTKService creates TimeTKServiceLog, it throws a System.Security.SecurityException. The exception includes the following message: "Requested registry access is not allowed". You need to resolve this problem.

What should you do?

- A. Configure Inetinfo.exe to run as the local administrator user account.
- B. Create an installer for TimeTKService, and create the new event log in the installer code.
- C. Modify the Web.config file by adding an identity element to impersonate the LOGON user specified by Internet Information Services (IIS).

D. Modify the permissions of the

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Eventlog registry key to give full control to the IUSR_*computername* user account.

Answer: A

Explanation: ASP.NET applications run under inetinfo.exe (the IIS process) or the ASP worker process aspnet_wp.exe, depending on security settings. Running as the local administrator account the IIS process would be able to create TimeServiceLog.

Reference: Visual Studio, Error: Unable to Start Debugging on the Web Server

Incorrect Answers

- B: This would not allow registry access.
- **C:** This does not work.
- D: For anonymous access the IUSR_computername user account is used.

QUESTION NO: 7

You are creating an XML Web service named TestKingCustomer that provides customer information. You write code to keep track of error messages, warning messages, and informational messages while the service is running. You use the Trace class to write the messages to a log file.

On test computers, you want to see error messages and warning messages. On deployment computers, you want to see error messages, but not warning messages.

Which two code segments should you use? (Each correct answer presents part of the solution. Choose two)

```
A. private static TraceSwitch mySwitch;
  static BankCustomer {
     mySwitch = new TraceSwitch("tswitch",
       "a trace switch");
  }
B. public static TraceLevel level;
  static BankCustomer {
     level = TraceLevel.Error;
C. Trace.WriteLineIf(mySwitch.TraceError,
     "An error occurred.");
  Trace.WriteLineIf (mySwitch.TraceWarning,
     "Warning message");
D. Trace.WriteLineIf(level == TraceLevel.Error,
     "The operation succeeded.");
  Trace.WriteLineIf(level == TraceLevel.Warning,
     "Warning message");
```

Answer: A, C

Explanation: Trace switches allow you to enable, disable, and filter tracing output. Typically, a deployed application is executed with its switches disabled.

- A: To use a switch you must first create a switch object
- **C:** We then use the WriteLineIf statement and test the switch to see if we should trace errors or warnings.

Reference: Visual Basic and Visual C# Concepts, Trace Switches .NET Framework Class Library, Trace.WriteLineIf Method [C#]

QUESTION NO: 8

You create a serviced component named TestKScheduler. TestKScheduler is registered in a library application. The Scheduler methods parse String objects into Date Time objects.

You write a console application named Coverage.exe to test each method in Scheduler. You want Coverage.exe to test Scheduler for multiple cultures to verify its globalization support.

What should you do?

- A. Create a CultureInfo object for each culture locale before calling the TestKScheduler methods.
- B. Create a RegionInfo object for each culture locale before calling the TestKScheduler methods.
- C. Set the current thread's CurrentCulture property to each culture locale before calling the TestKScheduler methods.
- D. Create a Coverage.exe.config file and add a <location> element to the configuration file for each culture locale.

Answer: C

Explanation: We set the CurrentCulture property to a local culture, then we call the TestKScheduler method. We repeat this step for each local culture.

Reference: Visual Studio, Globalization Testing

Incorrect Answers

- A: CultureInfo objects would not by themselves be tested.
- B: RegionInfo objects would not by themselves be tested.
- **D:** This is not how to set up this.

QUESTION NO: 9

You have an ASP.NET application named TKWebApp. This application uses a private assembly named Employee to store and retrieve employee data. Employee is located in the bin directory of TKWebApp.

You develop a new ASP.NET application named TKWebApp2 that also needs to use Employee. You assign Employee a strong name, set its version to 1.0.0.0, and install it in the global assembly cache. You then create a publisher policy assembly for version 1.0.0.0 and install it in the global assembly cache.

You compile TKWebApp2 against version 1.0.0.0. You do not recompile MyWebApp. You then run TKWebApp.

What is the most likely result?

- A. A VersionNotFoundException is thrown.
- B. Employee is loaded from the bin directory.
- C. Version 1.0.0.0 of Employee is loaded from the global assembly cache.
- D. Version 1.0.0.0 of Employee is loaded by the publisher policy assembly.

Answer: D

Explanation: Vendors of assemblies can state that applications should use a newer version of an assembly by including a publisher policy file with the upgraded assembly.

Reference:

.NET Framework Developer's Guide. Creating a Publisher Policy File .NET Framework Developer's Guide, Versioning

Incorrect Answers

- A: A VersionNotFoundExceptio represents the exception that is thrown when attempting to return a version of a DataRow that has been deleted.
- **B**, **C**: The Publisher Policy Assembly will be used.

QUESTION NO: 10

You are creating a Windows-based application named TKWinApp. To the application, you add a Windows Form named TKForm and a reference to a SingleCall .NET Remoting object named TheirObject.

You need to ensure that TKForm creates an instance of TheirObject to make the necessary remote object calls.

Which code segment should you use?

```
A. RemotingConfiguration.RegisterActivatedClientType(
     typeof(TheirObject),
     "http://TestKingServer/TheirAppPath/TheirObject.rem");
  TheirObject theirObject = new TheirObject();
B. RemotingConfiguration.RegisterWellKnownClientType(
     typeof(TestKingObject);
     "http://TestKingServer/TheirAppPath/TheirObject.rem");
  TheirObject theirObject = new TheirObject();
C. RemotingConfiguration.RegisterActivatedServiceType(
     typeof(TheirObject));
  TheirObject theirObject = new TheirObject();
D. RemotingConfiguration.RegisterWellKnownServiceType(
     typeof(TheirObject),
     "http://TestKingServer/TheirAppPath/TheirObject.rem",
     WellKnownObjectMode.Singleton);
  TheirObject theirObject = new TheirObject();
```

Answer: B

Explanation: The RemotingConfiguration Class provides various static methods for configuring the remoting infrastructure. The **RegisterWellKnownClientType** method registers an object Type on the client end as a well-known type (single call or singleton).

Reference: .NET Framework Class Library, RemotingConfiguration Members

Incorrect Answers

- A: The **RegisterActivatedClientType** method registers an object Type on the client end as a type that can be activated on the server.
- C: The **RegisterActivatedServiceType** method registers an object Type on the service end as one that can be activated on request from a client.
- **D:** The **RegisterWellKnownServiceType** method registers an object type on the service end as a well-known type (single call or singleton).

QUESTION NO: 11

You create an XML Web service project that consists of three services named BronzeService, SilverService, and GoldService. All three services are located in the same virtual directory on a production computer. When customers subscribe to your service, they select only one of the three available services.

A new customer subscribes to SilverService. You need to create a discovery document that enables this customer to use only SilverService.

Which discovery document should you create?

```
A. <disco:discovery
     xmlns:disco="http://schemas.xmlsoap.org/disco/"
     xmlns:scl=http://schemas.xmlsoap.org/disco/scl/>
     <scl:contractRef ref="SilverService.asmx?wsdl" />
  </disco:discovery>
B. <disco:discovery
     xmlns:disco="http://schemas.xmlsoap.org/disco/"
     xmlns:scl="http://schemas.xmlsoap.org/disco/scl/">
     <scl:contractRef ref="SilverService.asmx" />
  </disco:discovery>
C. <dynamicDiscovery xmlns="urn:schemas-
  dynamicdiscovery:disco.2000-03-17">
     <exclude path=" vti cnf" />
     <exclude path=" vti pvt" />
     <exclude path=" vti log" />
     <exclude path=" vti script" />
     <exclude path=" vti txt" />
     <exclude path="Web References" />
  </dynamicDiscovery>
D. <dynamicDiscovery xmlns="urn:schemas-
  dynamicdiscovery:disco.2000-03-17">
     <exclude path=" vti cnf" />
     <exclude path=" vti pvt" />
     <exclude path=" vti log" />
     <exclude path=" vti script" />
     <exclude path=" vti txt" />
     <exclude path="Web References" />
     <exclude path="BronzeService.asmx" />
     <exclude path="GoldService.asmx" />
  </dynamicDiscovery>
```

Answer: A

Explanation: We should create a static discovery file. We use a **<discovery>** element. Service description references are specified in a discovery document by adding a **<contractRef>** element. We should use the SilverService.asmx?wsdl query string, since the web page may and the web service may not be located in the same directory.

Note: XML Web service discovery is the process of locating and interrogating XML Web service descriptions, which is a preliminary step for accessing an XML Web service. Programmatic discovery can be enabled when an XML Web service publishes a .disco file, which is an XML document that can contains links to other discovery documents.

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Note Dynamic Discovery: Dynamic discovery is a process by which ASP.NET can perform an iterative search through a hierarchy of folders on a development Web server to locate available XML Web services. A dynamic discovery (.vsdisco) file is an XML-based file with a root node called <dynamicDiscovery>. To maintain positive control over which XML Web services clients can discover, you should only use dynamic discovery on development Web servers. When deploying an XML Web service to a production Web server, you should instead create a static discovery file (.disco) for those XML Web services you want to enable clients to discover.

Reference: .NET Framework Developer's Guide, Enabling Discovery for an XML Web Service

Visual Basic and Visual C# Concepts, Deploying XML Web Services in Managed Code

Incorrect Answers

B: A file path to a Web Service must include the ?WSDL query string. The short form of the URL (SilverService.asmx) is sufficient, provided that the Web service is located in the same folder as the Web page using the WebService behavior.

C, D: We should create a static discovery file, not a dynamic discovery file.

QUESTION NO: 12

You create version 1.0.0.0 of an assembly named TestKiAssembly. You register the assembly in the global assembly cache.

TestKiAssembly consists of two .NET Remoting objects named TKRemoteObject1 and TKRempoteObject2 These objects are configured in the App.config file of TestKiAssembly as shown in the following code segment:

```
<system.runtime.remoting>
  <application>
     <service>
       <activated type="TestKiAssembly.TKRemoteObject1,</pre>
          TestKiAssembly, Version=1.0.0.0, Culture=neutral,
          PublicKeyToken=28dckd83491duj" />
       <wellKnown mode="SingleCall"
       objectUri="TKRemoteObject2.rem"
       type="TestKiAssembly.TKRemoteObject2, TestKiAssembly,
       Version=1.0.0.0, Culture=neutral,
          PublicKeyToken=28dckd83491duj" />
       <channels>
          <channel ref="http" />
       </channels>
     </service>
  </application>
</system.runtime.remoting>
```

You create an application named TKApp that resides on a different computer than TestKiAssembly. TKApp references version 1.0.0.0 of TestKiAssembly. TKApp contains code that activates instances of TKRemoteObject1 and TKRemoteObject2 to use their services.

Due to changes in business needs, you must update TestKiAssembly. You create version 2.0.0.0 of TestKiAssembly, which is backward compatible, but you do not update any information in the App.config file of TestKiAssembly. You register version 2.0.0.0 of TestKiAssembly in the global assembly cache. You then rebuild TKApp.

Which version of the remote object will MyApp activate?

- A. Version 1.0.0.0 of TKRemoteObject1; version 1.0.0.0 of TKRemoteObject2.
- B. Version 1.0.0.0 of TKRemoteObject1; version 2.0.0.0 of TKRemoteObject2.
- C. Version 2.0.0.0 of TKRemoteObject1; version 1.0.0.0 of TKRemoteObject2.
- D. Version 2.0.0.0 of TKRemoteObject1; version 2.0.0.0 of TKRemoteObject2.

Answer: B Explanation: Version 1.0.0.0 of MyRemoteObject1 is used since the following client-activated configuration is used: <activated type="TestKiAssembly.TKRemoteObject1, Version=1.0.0.0...

The <wellknown> element Contains information about server-activated objects the application exposes to clients. TKRemoteObject2 is therefore server-activated. The server controls what version is activated when a client connects to a server-activated object. Therefore Version 2.0.0.0 will be used for TKRemoteObject2.

Note 1:

When a client activates a client-activated (that is, an <activated>) object, a network call is immediately sent to the server where the requested object is activated and an object reference to the object is returned to the client. Because the client directs the activation of the object, the client also chooses the version of the object to be activated.

Note 2: For Web applications, the source controlled configuration file is called Web.config. For non-Web applications, the source controlled file is called app.config.

Reference: .NET Framework Developer's Guide, Versioning

Incorrect Answers

A: TKRemoteObject2 is server-activated (or <wellknown>) so the latest available version (2.0.0.0) will be used.

C, D: Client-Side activation is used (see note 1). The version specified (1.0.0.0) is used.

You are creating an XML Web service named InventoryService for a TestKing Ltd. Each branch of TestKing Ltd. will build its own client application to consume InventoryService. Each branch connects to the main office of the dealership by using a virtual private network (VPN). All computers in the dealership run on Microsoft Windows operating systems.

You need to ensure that callers of InventoryService are authenticated based on their Windows logon name and password. You configure Internet Information Services (IIS) according to your security needs. You need to configure the authentication type in the Web.config file.

Which code segment should you use?

- A. <authentication mode="Basic" />
- B. <authentication mode="Forms" />
- C. <authentication mode="Integrated" />
- D. <authentication mode="Windows" />

Answer: D

Explanation: Integrated Windows authentication can delegate security credentials among computers running Windows 2000 and later that are trusted and configured for delegation.

Note: ASP .NET supports Forms Authentication, Passport Authentication, Windows Authentication, and None. In the Web.config file these are denoted Cookie, Passport, Windows and None.

Reference: Building Distributed Applications, Authentication in ASP .NET: .NET Security Guidance

Incorrect Answers

- A: Basic authentication does not use the Windows logon name and password.
- **B:** Integrated is not a valid authentication mode in the Web.config file. Furthermore Cookie authentication mode does not use Windows login and Windows password.
- C: Integrated is not a valid authentication mode in the Web.config file.

QUESTION NO: 14

You are preparing to deploy an XML Web service named TestKingInventoryService. This service queries a Microsoft SQL Server database and returns information to the caller.

You use Visual Studio .NET to create a setup project. You need to install InventoryService. You also need to run a script to create the necessary SQL Server

database and tables to store the data. To accomplish this, you need to configure the project to have administrator rights to the SQL Server database.

You add a custom dialog box to the project that prompts the user for the administrator user name and password that are used to connect to the SQL Server database. You need to make the user name and password available to a custom Installer class that will execute the script.

What should you do?

- A. Add a launch condition that passed the user name and password to the Install subroutine.
- B. Add a merge module to the project that captures the user name and password. Use the merge module to access these values in the Install subroutine.
- C. Retrieve the user name and password from the savedState object in the Install subroutine.
- D. Create a custom install action.
 Set the CustomActionData property to the entered user name and password.
 Then access these values in the Install subroutine.

Answer: D

Explanation: The CustomActionData Property specifies additional data that can be evaluated by a custom action during installation. Custom actions are run at the end of an installation and cannot access information about the installation; the CustomActionData property allows you to store information about the installation that can be read by the custom action.

Reference: Visual Studio, CustomActionData Property

Incorrect Answers

- A: It is not possible to achieve the goal with a launch condition.
- **B:** Merge modules would be of no use here.

Note: A merge module is like a snapshot of a particular version of a component. A new merge module should be created for each successive version of a component in order to avoid version conflicts.

C: The savedStateGets property gets an IDictionary that represents the current state of the installation.

QUESTION NO: 15

You create a Windows service that processes XML messages placed in a MSMQ queue. You discover that the service is not functioning properly.

You need to debug the service to correct the program.

What should you do?

- A. Start the Windows service. Then attach a debugger to the process.
- B. Attach a debugger to the Windows service. Then start the Windows service.
- C. Start the Windows service. Then run the .NET Services Installation tool (Regsvcs.exe).
- D. Place a breakpoint in the Main method of the Windows service. Then run the application within the Visual Studio .NET integrated development environment (IDE).

Answer: A

Explanation: First we start the service, and then we attach the debugger to it. We must attach to available running processes.

Note: Microsoft Message Queuing Services (MSMQ) enables applications running at different times to communicate across heterogeneous networks and systems that may be temporarily offline.

Reference: Visual Studio, Attaching to a Running Program

Incorrect Answers

B: We must attach the debugger to a running service.

C: The NET Services Installation Tool (Regsvcs.exe) cannot help in debugging the service processing the MSMQ queue.

Note: Regsvsc.exe loads and registers an assembly, generates, registers, and installs a type library into a specified COM+ 1.0 application, and configures services that you have added programmatically to your class.

D:

QUESTION NO: 16

You create a .NET Remoting object named Time. The Time is in the Utils namespace and is in an assembly file named TestKing.dll.

The Time class is hosted in an Internet Information Services (IIS) virtual directory named UtilsSvr. The Time class is configured to be a server-activated object and uses a URI named Time.rem.

You use a client application named TestK.exe to test the Time object. TestK.exe creates instances of the Time object by using the following method signature:

```
public Time CreateInstance() {
    RemotingConfiguration.Configure("TestK.exe.config");
    return new Time();
}
```

You want TestKing.exe to create instances of the Time class on a compute named Hosting.

What should you do?

```
A. Create a TestK.exe.config file that includes the following code segment:
  <configuration> <system.runtime.remoting>
     <application> <client>
        <wellKnown
           type="Utils.Time, TestKing"
           url="tcp://Hosting:80/UtilsSvr/Time.rem"/>
     </client> </application>
  </system.runtime.remoting> </configuration>
B. Create a TestK.exe.config file that includes the following code segment:
  <configuration> <system.runtime.remoting>
     <application> <client>
        <wellKnown
           type="Utils.Time, TestKing"
           url="http://Hosting/UtilsSvr/Time.rem"/>
     </client> </application>
  </system.runtime.remoting> </configuration>
C. Create a TestK.exe.config file that includes the following code segment:
  <configuration> <system.runtime.remoting>
     <application>
        <client url="http://Hosting/UtilsSvr/Time.rem">
           <activated
           type="Utils.Time, TestKing"/>
     <client> </application>
  </system.runtime.remoting> </configuration>
D. Create a TestK.exe.config file that includes the following code segment:
  <configuration> <system.runtime.remoting>
     <application>
        <client url="tcp://Hosting:80/UtilsSvr/Time.rem">
           <activated
           type="Utils.Time, TestKing"/>
     </client> </application>
  </system.runtime.remoting> </configuration>
```

Answer: B

Explanation: We use the <wellknown> markup to indicate that it is server-activated object. Then we specify the http protocol in the url. A http channel should be used.

Reference: .NET Framework Developer's Guide, Versioning

Incorrect Answers

A: We should use a http channel, not a tcp channel.

C, **D**: We should use the <wellknown> markup to specify that the object should be serveractivated.

QUESTION NO: 17

You are creating an XML Web service that processes highly confidential messages. The service exposed a Web method named RetrieveMessage that takes as input a code name and returns an encrypted message.

You create a SOAP extension and override the extension's ProcessMessage method so that you can encrypt the message before it is sent back to the caller.

You need to encrypt only the data within the RetrieveMessageResult node of the SOAP response. You create a function named EncryptMessage that encrypts the RetrieveMessageResult node. You need to ensure that this method gets called before sending the message back to the caller.

During which SoapMessageStage should you call EncryptMessage?

- A. BeforeSerialize
- B. AfterSerialize
- C. BeforeDeserialize
- D. AfterDeserialize

Answer: B

Explanation: An encryption SOAP extension might encrypt the XML portion of the SOAP message, after ASP.NET serializes the client's arguments, and then decrypt the SOAP message on the Web server before ASP.NET deserializes the SOAP message. The SOAP extension is encrypting in the AfterSerialize stage and decrypting in the BeforeDeserialize stage.

Note: The AfterSerialize stage occurs just after a SoapMessage is serialized, but before the SOAP message is sent over the wire.

Reference:

.NET Framework Developer's Guide, Altering the SOAP Message Using SOAP Extensions .NET Framework Class Library, SoapMessageStage Enumeration

Incorrect Answers

- A: The BeforeSerialize stage occurs just prior to a SoapMessage being serialized.
- **C:** The BeforeDeserialize stage occurs just before a SoapMessage is deserialized from the SOAP message sent across the network into an object.
- **D:** The AfterDeserialize stage occurs just after a SoapMessage is deserialized from a SOAP message into an object.

You are developing an application named TestKApp by using Visual C# .NET and Visual Basic .NET. The application will use functions form a DLL written in unmanaged code.

One function requires the calling application to allocate unmanaged memory, fill it with data, and pass the address of the memory to the function. On returning from the function, the calling application must deallocate the unmanaged memory.

You need to decide how your application will handle unmanaged memory.

What should you do?

- A. Use a byte array.
- B. Use the methods of the Marshal class.
- C. Use the methods of the MemoryStream class.
- D. Derive a new class from the Stream class, and override the allocation methods.

Answer: B

Explanation: The Marshal class provides a collection of methods pertaining to allocating unmanaged memory, copying unmanaged memory blocks, and converting managed to unmanaged types.

Reference: .NET Framework Class Library, Marshal Class [C#]

Incorrect Answers

A, D: Bytes and streams can not be used for allocating and deallocating memory.

C: The MemoryStream class creates a stream whose backing store is memory.

QUESTION NO: 19

You are using Visual Studio .NET to develop an application to replace a COM-based application. You are assigned to write a .NET class that will be used by client applications as a COM object. Your class code is being moved and modified while development continues on the new application.

You want to minimize any possible disruption to the COM interface as a result of code changes.

Which code segment should you use?

```
A. [ClassInterface()]
   public Class TKClassToExpose {
     public int Calc() {
        // Implementation code goes here.
```

```
}
  }
   [Guid("9ED54F84-A89D-4fcd-A854-44251E925F09")]
B.
  public interface ITKClassToExpose {
     public int Calc();
  }
  [ClassInterface[ClassInterfaceType.None)]
     public int Calc() {
       // Implementation code goes here.
     }
  }
C. [Guid("9ED54F84-A89D-4fcd-A854-44251E925F09")]
  [ComVisible(true)]
  public class TKClassToExpose {
     public int Calc() {
       // Implementation code goes here.
     }
  }
D. [ClassInterface(ClassInterfaceType.AutoDispatch)]
  public class TKClassToExpose {
     public int Calc() {
       // Implementation code goes here.
     }
  }
```

Answer: D

Explanation: The ClassInterfaceType.AutoDispatch indicates that the class only supports late binding for COM clients. A dispinterface for the class is automatically exposed to COM clients on request. The dispinterface does not exhibit versioning problems because of the late bindings.

Reference: .NET Framework Class Library, ClassInterfaceType Enumeration

Incorrect Answers

- A: ClassInterface() is not correct usage.
- **B:** The ClassInterfaceType.None indicates that no class interface is generated for the class. If no interfaces are implemented explicitly, the class will only provide late bound access through IDispatch. Users are expected to expose functionality through interfaces that are explicitly implemented by the class.
- C: ComVisible does not achieve much. Public classes are visible by default.

QUESTION NO: 20

You are creating an ASP.NET application named TestKWebApp. To TestKWebApp, you add a Web reference to an XML Web service named UserService.

UserService consists of a Web method named RetrieveUserInfo. This Web method takes a userID as input and returns a DataSet object containing user information. If the userID is not between the values 1 and 1000, a System ArgumentException is thrown.

In TestKWebApp, you write a try/catch block to capture any exceptions that are thrown by UserService. You invoke RetrieveUserInfo and pass 1001 as the user ID.

Which type of exception will be caught?

- A. System.ApplicationException
- B. System.ArgumentException
- C. System.Web.Service.Protocols.SoapException
- D. System.Web.Service.Protocols.SoapHeaderException

Answer: C

Explanation: The SoapException is thrown when an XML Web service method is called over SOAP and an exception occurs.

Note: Simple Object Access Protocol (SOAP) codifies the practice of using XML and HTTP to invoke methods across networks and computer platforms. SOAP is a XML-based protocol that lets you activate applications or objects within an application across the Internet.

Reference: .NET Framework Class Library, SoapException Class

Incorrect Answers

- **A:** The ApplicationException is thrown when a non-fatal application error occurs. ApplicationException is thrown by a user program, not by the common language runtime.
- **B:** The ArgumentException exception is thrown when one of the arguments provided to a method is not valid.
- **D:** The SoapHeaderException is thrown when an XML Web service method is called over SOAP and an exception occurs during processing of the SOAP header.

QUESTION NO: 21

You are developing a Windows-based application that requires the use of a calculation function named CalculateValue. This function includes the following signature:

int CalculateValue(int x) ;

CalculateValue is located in an unmanaged DLL named TestKingFunctions.dll, and is not part of a COM interface. You need to be able to use CalculateValue in your application.

Which action or actions should you take? (Choose all that apply)

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- A. Use Regsvr32.exe to register TestKingFunctions.dll.
- B. Use Visual Studio .NET to add a reference to TestKinglFunctions.dll.
- C. To your application, add the following code segment: using TestKingFunctions;
- D. To your application, add the following code segment: [DllImport("TestKingFunctions.dll")] public static extern int CalculateValue(int x);

Answer: B, D

Explanation:

B: We must add a reference to the dll.

D: We must identify the function we want to use in the unmanaged dll.

Reference: .NET Framework Developer's Guide, Consuming Unmanaged DLL Functions .NET Framework Developer's Guide, A Closer Look at Platform Invoke

Incorrect Answers

- A: Regsrv32 is not required in Visual Studio .NET. Regsrv32 was used for Visual Basic 6.0, and for Visual C++ 6.0 components.
- C: We are not using the NameSpace of the unmanaged dll.

QUESTION NO: 22

You are creating a .NET Remoting object named Dealer for automobile dealership. Dealer exposes a method named SaveTestKingSales that saves sales information for the dealership.

Dealer is configured to use Integrated Windows authentication to authenticate its callers. You must ensure that all users of SaveTestKingSales are members of the Manager group before allowing the code within SaveTestKingSales to run.

Which code segment should you use?

```
A. [PrincipalPermission(SecurityAction.Demand,
    Role="Manager")]
public DataSet SaveTestKingSales(DataSet sales) {
    // Code to save sales data goes here.
  }
B. [PrincipalPermission(SecurityAction.LinkDemand,
    Role=Manager")]
public DataSet SaveTestKingSales(DataSet sales) {
    // Code to save sales data goes here.
  }
C. [PrincipalPermission(SecurityAction.InheritanceDemand,
    Role="Manager")]
public DataSet SaveTestKingSales(DataSet sales) {
```

```
// Code to save sales data goes here.
}
D. public DataSet SaveTestKingSales(DataSet sales) {
   string role = "Manager";
   PrincipalPermission perm = new
        PrincipalPermission(null, role);
   // Code to save sales data goes here.
}
```

Answer: A

Explanation: The code –

PrincipalPermission (SecurityAction.Demand, Role="Manager" checks if the active principal is a member of the Manager group. If this is the case the code will run, if not an exception will be thrown.

Note 1: A demand causes the runtime to perform a security check to enforce restrictions on calling code.

Note 2: The PrincipalPermission class represents the identity or role that the principal must match and is compatible with both declarative and imperative security checks.

Reference: .NET Framework Developer's Guide, Security Demands

Incorrect Answers

- **B:** A link demand causes a security check during just-in-time compilation and only checks the immediate caller of the code.
- **C:** You can place inheritance demands at the class level to ensure that only code with the specified permission can inherit from your class. However, we want to specify who can run the code, not who can inherit from the class.
- **D:** This code is not addressing the problem.

QUESTION NO: 23

You create three Windows services named TK1, TK2, and TK3. You want to install all three services on a computer named TestKingA by using the Installer tool (Installutil.exe).

On the command line of TestKingA, you enter and run the following command: Installutil TK1 TK2 TK3

During the installation process, TK3 throws an installation error. The installation process completes.

How many of the three services are now installed on TestKingA?

- A. None
- B. One

- C. Two
- D. Three

Answer: A

Explanation: Installutil.exe performs installation in a transactional manner; if one of the assemblies fails to install, it rolls back the installations of all other assemblies.

Reference: .NET Framework Tools, Installer Tool (Installutil.exe)

Incorrect Answers

B, **C**; **D**: The installation of TK3 fails and the installation of TK2 and TK1 is rolled back.

QUESTION NO: 24

You create two serviced components named OrderPipeline and OrderAdmin. Each component is registered in a separate COM+ server application.

Both components use pricing data. OrderPipeline reads the pricing data for placing user orders. OrderAdmin modifies the pricing data.

You want to ensure that OrderPipeline accesses the pricing data as quickly as possible, while still being able to immediately retrieve any pricing changes made by OrderAdmin.

What should you do?

- A. Store the pricing data in the Shared Property Manager.
- B. Store the pricing data in Microsoft SQL Server database.
- C. Store the pricing data in a Hashtable object within OrderAdmin. Expose the Hashtable object through a property on OrderAdmin.
- D. Store the pricing data in an XmlDocument object within OrderAdmin. Expose the XmlDocument object through a property on OrderAdmin.

Answer: C

Explanation: A Hashtable can safely support one writer and multiple readers concurrently. This is the most efficient solution

Reference:

.NET Framework Class Library, Hashtable.IsSynchronized Property Platform SDK: COM+ (Component Services), The Shared Property Manager

Incorrect Answers

A: A Shared Property Manager would be a possible solution, however it is not required and is not the most efficient solution.

Note: In COM+, shared transient state for objects is managed by using the Shared

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Property Manager (SPM). The SPM is a resource dispenser that you can use to share state among multiple objects within a server process.

- **B:** SQL Server could provide a solution. However, it would not be the most efficient solution.
- **D:** A hast table would be more efficient.

QUESTION NO: 25

You have a .NET Remoting object named Utils. The Utils class is a client-activated .NET Remoting object.

You want to write a client application that creates and uses a Utils object. You want the client application to hold onto a reference to a Utils object for the duration of its execution.

What should you do?

- A. Construct the Utils object, and hold the object in a member variable.
- B. Construct the Utils object, and set the LifeTimeService.LeaseTime to **0**.
- C. In the client application, create an Implementation of the ISponsor interface. Implement the Renewal method to extend the lease.
- D. In the client application, create an Implementation of the ILease interface. Implement the CurrentLeaseTime property to return Int32.MaxValue.

Answer: C

Explanation: We must create a sponsor, on the ISponser interface, that implements the renewal method to extend the lease. This will ensure that the object lease will be renewed as long the client application is running.

Note: Each Marshal-by-reference object (MBR) has a lifetime that is controlled by a combination of leases, a lease manager, and some number of sponsors. A sponsor is an object that can request a new a lease for a particular object by registering itself with the lease manager. The lease manager periodically examines all leases for expired lease times. If a lease has expired, the lease manager walks its list of sponsors for that object and requests whether any of them want to renew the lease. If no sponsor renews the lease, the lease manager removes the lease and the object is deleted and its memory reclaimed by garbage collection. The CurrentLeaseTime can be changed, either from an ILease.Renew call or when the lease manager calls ISponsor.Renewal on a sponsor.

Reference: .NET Framework Developer's Guide, Lifetime Leases

.NET Framework Class Library, ILease.CurrentLeaseTime Property [C#] Incorrect Answers

- A: This would not renew the release of the object. The default lease time is 5 minutes.
- **B:** A lease time of zero sets the lease to an infinite lifetime.
- **D:** The ILease.CurrentLeaseTime is a read-only property of the ILease interface. We cannot configure this property.

You are creating a serviced component named UserManager. UserManager adds user accounts to multiple transactional data sources.

The UserManager class includes the following code segment:

```
[Transaction(TransactionOption.Required)]
[SecurityRole("Admin")]
public class UserManager : ServicedComponent {
    public void AddUser(string TestKname, string TestKpassword)
{
        // Code to add the user to data sources goes here.
    }
}
```

You must ensure that the AddUser method reliably saves the new user to either all data sources or no data sources.

What should you do?

- A. To AddUser, add the following attribute: [AutoComplete()]
- B. To UserManager, add the following attribute: [JustInTimeActivation(false)]
- C. To the end of AddUser, add the following line of code: ContextUtil.EnableCommit();
- D. To the end of AddUser, add the following line of code: ContextUtil.MyTransactionVote = true;

Answer: C

Explanation: The TransactionOption.Required shares a transaction, if one exists, and creates a new transaction, if necessary. We should commit this transaction at the end of AddUser with ContextUtil.EnableCommit () statement.

Reference: .NET Framework Class Library, ContextUtil Methods

Incorrect Answers

- A: Autocomplete is out of context here.
- **B:** Just-in-time (JIT) activation is a COM+ service that enables you to create an object as a nonactive, context-only object. JIT does not apply here.
- **D:** Not useful.

You create a serviced component named Tracker that uses attributes to dynamically register itself for COM+ services. Tracker is in an assembly file named TestKing.dll. Tracker uses transactions and role-based security. The roles and the application identity for Tracker are configured on the development computer.

You are preparing to hand off Tracker to and administrator for deployment to production computers. You want all the COM+ configuration information for Tracker to be installed on the production computers.

What should you do?

- A. Use the Component Services tool to export Tracker to an .msi file. Provide to the administrator the .msi file with instructions to run the installer.
- B. Provide to the administrator the TestKing.dll file.
 Instruct the administrator to copy TestKing.dll to all production computers and to install it in the global assembly cache.
- C. Provide to the administrator the TestKing.dll file. Instruct the administrator to use the .NET Services Installation tool (Regsvcs.exe) to install Tracker.
- D. Add a new merge module to your solution.Add TestKing.dll to the merge module.Provide to the administrator the .msm file with installation instructions.

Answer: A

Explanation: We use the Components services tool to create an installation package. The installation package will include COM+ configuration information. The installation package can be installed on a separate system.

Procedure to create the .msi package:

Step 1: Open the Component Services Console: Start->Program->Administrative Tools->Component Services

Step 2: Right click the appropriate COM+ service and select export.

Step 3: Finish the Welcome to COM+ Application Export Wizard.

Note: The Component Services administrative tool enables you to configure and administer COM components and COM+ applications. With Component Services, administrators can deploy and administer Component Services applications through a graphical user interface or automate administrative tasks by using a scripting or programming language. Software developers can use Component Services to visually configure routine component and application behavior, such as security and participation in transactions, and to integrate components into Component Services applications.

Reference: Windows XP Help.

Incorrect Answers

B: The dll file does not include COM+ configuration information.

- **C:** Regsvcs.exe cannot be used to transfer the COM+ dll from one computer to another. **Note:** The .NET Services Installation tool performs the following actions:
 - * Loads and registers an assembly.
 - * Generates, registers, and installs a type library into a specified COM+ 1.0 application.
 - * Configures services that you have added programmatically to your class.
- **D:** To install a merge module, it must first be merged by using a merge tool into a .msi file. **Note:** A merge module is like a snapshot of a particular version of a component. A new merge module should be created for each successive version of a component in order to avoid version conflicts.

You are creating an XML Web service that provides a daily quotation from literary works to its customers. This quotation is requested in many different languages, thousands of times every day, and by thousands of Web sites operating many different platform.

A Web method named GetTestKingQuotes takes a languageID as input. GetTestKingQuotes uses this language ID to retrieve a translated version of the daily quotation from a Microsoft SQL Server database and to return that quotation to the customer.

You want to minimize the time it takes to return the translated version.

What should you do?

- A. Store each translated quotation by using the Cache object.
- B. Store each translated quotation by using the Session object.
- C. Set the BufferResponse property of the WebMethod attribute to false.
- D. Set the CacheDuration property of the WebMethod attribute to an interval greater than zero.

Answer: A

Explanation: We should store each translated quotation in the Cache, more specifically we use the translation quotation to construct a Cache object.

Reference:

- .NET Framework Developer's Guide, Adding Items to the Cache [C#]
- .NET Framework Class Library, WebMethodAttribute.BufferResponse Property

.NET Framework Class Library, WebMethodAttribute.CacheDuration Property [C#]

Incorrect Answers

- **B:** The Session object is used to store information needed for a particular user-session. The objects would have to be recreated for every single session.
- **C:** The BufferResponse property gets or sets whether the response for this request is buffered. If set to false, no buffering would be used. This is the opposite to the

requirements.

Note: Setting BufferResponse to true, serializes the response of the XML Web service method into a memory buffer until either the response is completely serialized or the buffer is full. The default value is **True**.

D: WebMethodAttribute.CacheDuration property gets or sets the number of seconds the response should be held in the cache.

QUESTION NO: 29

You are creating a .NET Remoting object named PropertyCache. PropertyCache will hold a Hashtable object or name/value pairs.

A variety of remote client applications will communicate with PropertyCache to set and get property values. You need to ensure that properties set by one client application are also accessible to other client applications.

Which two actions should you take? (Each correct answer presents part of the solution. Choose two)

- A. Configure PropertyCache to be a client-activated object.
- B. Configure PropertyCache to be a server-activated Singleton object.
- C. Configure PropertyCache to be a server-activated SingleCall object.
- D. Derive the PropertyCache class from MarshalByRefObject and override InitializeLifetimeService() to return null.
- E. Mark the PropertyCache class with the Serializable attribute. Implement the ISponsor interface in the PropertyCache class.
- F. Implement the ISerializable and ILease interfaces in the PropertyCache class. Implement ILease.CurrentLeaseTime to return Int32.MaxValue.

Answer: B, E

Explanation:

B: Singleton types never have more than one instance at any one time. If an instance exists, all client requests are serviced by that instance. If one does not exist, the server creates an instance and all subsequent client requests will be serviced by that instance.

E: The ISponsor interface can be used to renew the lease of the object.

Reference:

- .NET Framework Developer's Guide, Server Activation [C#]
- .NET Framework Developer's Guide, Initializing Leases [C#]
- .NET Framework Developer's Guide, Client Activation [C#]

Incorrect Answers

- A: Client-activated objects are objects whose lifetimes are controlled by the calling application domain, just as they would be if the object were local to the client.
- C: SingleCall types always have one instance per client request.

- **D:** No lease is created if the lease time is 0 (zero) or a null lease is returned from InitializeLifetimeService().
- **F:** The ILease.CurrentLeaseTime is a read-only property of the ILease interface. We cannot configure this property.

You create a .NET Remoting object named Patientinfo that exposes medical patient information. Because of the confidential nature of the information, you must ensure that the data remains secure.

You want client applications to connect to Patientinfo over a secure communication channel. You want to accomplish this task by writing the minimum amount of code.

What should you do?

- A. Create your own host application and use a TcpChannel and BinaryFormatter.
- B. Create your own host application and use an HttpChannel and a SoapFormatter.
- C. Install Patientinfo in an Internet Information Services (IIS) virtual directory. Configure Patientinfo to use a TcpChannel and a BinaryFormatter. Configure IIS to use SSL.
- D. Install Patientinfo in an Internet Information Services (IIS) virtual directory. Configure Patientinfo to use an HttpChannel and a SoapFormatter. Configure IIS to use SSL.

Answer: D

Explanation: To minimize the coding we use IIS to deploy the .NET Remoting Object. We then use SSL to encrypt the HTTP traffic.

Reference: SSL in WinHTTP

Incorrect Answers

A, B: Creating your own host application would require more coding. **C:** SSL encrypts HTTP traffic, not TCP traffic.

QUESTION NO: 31

You create an XML Web service named AutoPartsService that processes automobile part orders. This service exposes a Web method named PlaceTestKOrder, which is shown in the following code segment:

[WebMethod(TransactionOption.RequiresNew)]
public DataSet PlaceTestKOrder(DataSet orderData) {
 Server1.BrakesService brakes = new
 Server1.BrakesService();

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```
Server2.PartsService parts = new Server2.PartsService();
    // Call OrderBrakes to order only brakes.
    brakes.OrderBrakes(orderData.Tables["Brakes"]);
    // Call OrderParts to order all other auto parts.
    parts.OrderParts(orderData.Tables["Parts"]);
}
```

BrakesService and PartsService are XML services. The TransactionOption property of OrderBrakes and OrderParts is set to TransactionOption.Required.

You develop a Windows Forms application named TKPartOrderApp that consumes AutoPartsService. You run TKPartOrderApp and place and order for three sets of brakes and four wheels. While PlaceTestKOrder is placing the order for the wheels, you close TKPartOrderApp.

What is the most likely result?

- A. OrderParts stops processing the order, and all orders are cancelled.
- B. OrderParts continues processing the order, and all orders are placed.
- C. OrderParts stops processing the order, the brakes are ordered, but the wheels are not ordered.
- D. OrderParts stops processing the order, the brakes are not ordered, but the wheels are ordered.

Answer: A

Explanation: PlaceOrderis run within a transaction. When the exception occur the whole transaction will be aborted. The order will be cancelled.

Note: TransactionOption.RequiresNew indicates that the XML Web service method requires a new transaction. When a request is processed, the XML Web service is created within a new transaction. If an exception is thrown from or not caught by a Web Service method, the transaction is automatically aborted.

Reference: .NET Framework Class Library, WebMethodAttribute.TransactionOption Property

QUESTION NO: 32

You create a serviced component named StockQuote that implements the IStockQuote interface. The StockQuote class includes the following code segment:

```
public class StockQuote : ServicedComponent, IStockQuote {
   public Price GetQuote(Ticker stock) {
        // Code for the method goes here.
   }
}
```

You want to secure StockQuote so that it can only be accessed by users in the Customers and Managers roles.

Which two actions should you take? (Each correct answer presents part of the solution. Choose two)

- A. To the StockQuote class, add the following attribute: [ComponentAccessControl]
- B. To the StockQuote class, add the following attribute: [Transaction(TransactionOption.Required)]
- C. Implement the ISecurityCallContext COM interface in the StockQuote class. Implement the IsCallerInRole method for the Customers and Managers roles.
- D. To the StockQuote class, ad the following attributes: [SecurityRole("Customers", false)] [SecurityRole("Managers", false)]
- E. To the beginning of the GetQuote method, add the following code segment:
 - if (!ContextUtil.IsCallerInRole("Managers,Customers")) {
 throw new SecurityException("Access is denied.");
 }

Answer: A, D

Explanation:

- A: The component attribute ComponentAccessControl is used to enable or disable access checks at the component level.
- **D:** You can use the SecurityRole attribute to add the roles at the assembly level. We must set the **SetEveryoneAccess** property to **false**:

```
[SecurityRole("Customers", false)]
[SecurityRole("Managers", false)]
```

Incorrect Answers

- **B:** We are not interested in configuring a transaction.
- C: Incomplete.
- **E:** The IsCallerInRole method determines whether the caller is in the specified role. We must specify a single role, we cannot specify two roles.

QUESTION NO: 33

You are creating an XML Web service named myService. This service has a function named WriteMessage that writes messages to a flat file in the C:\TestKingLogs\myServiceLog directory.

You want to implement security for WriteMessage so that WriteMessage and all the code it calls can write messages only to the myServiceLog directory.

Which code segment should you use?

```
A. FileIOPermission filePermission = new FileIOPermission
     (FileIOPermissionAccess.Write,
"C:\\TestKingLogs\myServiceLog");
  filePermission.Demand();
B. FileIOPermission filePermission = new FileIOPermission
     (FileIOPermissionAccess.Write,
  "C:\\TestKingLogs\myServiceLog");
  filePermission.Deny();
C. FileIOPermission filePermission = new FileIOPermission
     (FileIOPermissionAccess.Write,
  "C:\\TestKingLogs\myServiceLog");
  filePermission.PermitOnly();
D. FileIOPermission filePermission = new FileIOPermission
     (FileIOPermissionAccess.Write,
"C:\\TestKingLogs\myServiceLog");
  filePermission.Assert();
```

Answer: C

Explanation: The CodeAccessPermission.PermitOnly method prevents callers higher in the call stack from using the code that calls this method to access all resources except for the resource specified by the current instance.

Reference:

.NET Framework Developer's Guide, PermitOnly

.NET Framework Class Library, CodeAccessPermission.Demand Method

.NET Framework Class Library, CodeAccessPermission.Assert Method

Incorrect Answers

A: We want to grant permission, not check the permission.

Note: The CodeAccessPermission.Demand method forces a SecurityException at run time if all callers higher in the call stack have not been granted the permission specified by the current instance.

- **B:** We must allow permission, not deny it.
- **D:** The CodeAccessPermission.Assert method asserts that calling code can access the resource identified by the current permission through the code that calls this method, even if callers higher in the stack have not been granted permission to access the resource.

QUESTION NO: 34

You create an assembly that contains a collection of serviced components. You want to secure these components by using a collection of COM+ roles. Different groups of roles will secure different components.

You need to ensure that role-based security is enforced in the assembly. You want to accomplish this goal by adding an attribute to the project source code.

Which attribute should you use?

- A. [assembly: SecurityRole("Assembly", true)]
- B. [assembly:

SecurityPermission(SecurityAction.RequestOptional)]

- C. [assembly: ApplicationActivation(ActivationOption.Server)]

Answer: C?

Explanation: Server specifies that serviced components in the marked application are activated in a system-provided process.

Reference: .NET Framework Developer's Guide, Registering Serviced Components

Incorrect Answers

- A: This allows a role named *assembly* access. It also allows everyone access. This does not make much sense.
- **B:** We don't want to configure permission for additional functionality.
- **D:** ApplicationComponent enables access checks at every level on calls into the application.

QUESTION NO: 35

You have a DataSet object named customersDataSet that contains a DataTable object named TestKCustomers. TestKCustomers retrieves information from a Microsoft SQL Server database. TestKCustomers contains a column named Region.

You want to create a DataView object named customersDataView that contains only customers in which the value in the Region column is France.

Which code segment should you use?

- A. DataView customersDataView = new DataView(customersDataSet.Tables["TestKCustomers"]); customersDataView.FindRows("Region = France");
- B. DataView customersDataView = new DataView(customersDataSet.Tables["TestKCustomers"]); customersDataView.FindRows("Region = 'France'");
- C. DataView customersDataView = new DataView(customersDataSet.Tables["TestKCustomers"]); customersDataView.RowFilter = ("Region = France");

D. DataView customersDataView = new DataView(customersDataSet.Tables["TestKCustomers"]); customersDataView.RowFilter= ("Region = 'France'");

Answer: D

Explanation: We use the RowFilter property to set the filter of the DataView. We also take care to use quotes for the value France.

Note 1: The DataView. RowFilter gets or sets the expression used to filter which rows are viewed in the DataView.

Note 2: The DataView.FindRows method returns an array of DataRowView objects whose columns match the specified sort key value.

Reference: .NET Framework Class Library, DataView.RowFilter Property [C#]

Incorrect Answers

- A: The DataRows method does not update the DataView it just produces a result. Furthermore, the search string is incorrect.
- **B:** The DataRows method does not update the DataView it just produces a result.
- C: The search string is incorrect. The value must be in quotes.

QUESTION NO: 36

You are troubleshooting a Visual Studio .NET application that was developed by a former colleague. You find the following code segment within a large assembly:

```
XmlElement theElement;
XmlDocument doc = new XmlDocument();
XmlDoclaration theDecl =
    doc.CreateXmlDeclaration("1.0",null,null);
doc.AppendChild(theDecl);
theElement = doc.CreateElement("Library");
doc.AppendChild(theElement);
theElement = doc.CreateElement("Book");
theElement.SetAttribute("type","Certification");
anotherElement = doc.CreateElement("TestKing 70-216 Q&A");
anotherElement.InnerText = "Book Title";
anotherElement.AppendChild(theElement);
```

Which XML output is produced by this code segment?

Answer: B

Explanation:

Step 1: First the XmlDeclaration is created.

doc.CreateXmlDeclaration("1.0",null,null);

Step 2: Then the Library element is created and appended to doc.

Step 3: The Book element is created. The attribute type="Mystery" is added. This element is appended to doc-

Incorrect Answers

- **A:** The book element is added to doc.
- **C:** The Title element is never appended to doc.
- **D:** The Book element, not the Title element is appended to doc.

QUESTION NO: 37

You have a DataSet object named loanCustomersDataSet that contains customers serviced by the loan department of TestKink Inc. You receive a second DataSet object named assetCustomersDataSet that contains customers serviced by the asset management department of your company. Both objects have the same structure.

You want to merge assetCustomersDataSet into loanCustomersDataSet and preserve the original values in loanCustomersDataSet.

Which code segment should you use?

- A. loanCustomersDataSet.Merge(assetCustomersDataSet);
- B. loanCustomersDataSet.Merge(assetCustomersDataSet, true);
- C. assetCustomersDataSet.Merge(loanCustomersDataSet);
- D_{\cdot} assetCustomersDataSet.Merge(loanCustomersDataSet, true);

Answer: B

Explanation: The DataSet.Merge method merges this DataSet with a specified DataSet. The data will be merged into the dataset on which the Merge method is applied. We want to merge into our Dateset, namely the loanCustomerDataSet. Furthermore, we want to preserve the original values in loanCustomerDataSet.

The Boolean parameter is the preserveChanges. PreserveChanges indicates a value indicating whether changes made to the current DataSet should be maintained. It should be true, if changes should be maintained, like in this scenario.

Reference: .NET Framework Class Library, DataSet.Merge Method (DataSet, Boolean) [Visual C#]

Incorrect Answers

A The PreserveChanges parameter must be set to true.C, D: We must merge into loanCustomerDataSet, not into the Dataset that we have received.

QUESTION NO: 38

You are developing an application that queries a table named Products in a Microsoft SQL Server database named TestKingData. The query will be stored in a string variable named sqlQuery. The query includes the following SQL code:

SELECT * FROM Products FOR XML AUTO

You must iterate the query results and populate an HTML table with product information.

You must ensure that your application processes the results as quickly as possible.

What should you do?

A. Use a SqlDataAdapter object and set its SelectCommand property to sqlQuery. Use the Fill method of the SqlDataAdapter object to read the data into a DataSet object.

Loop through the associated rows to read the data.

B. Use a SqlDataAdapter object and set its SelectCommand property to sqlQuery. Use the Fill method of the SqlDataAdapter object to read the data into a DataSet object.

Use the ReadXml method of the DataSet object to read the data.

C. Set the SqlCommand object's CommandText to **sqlQuery**. Use the ExecuteReader method of the SqlCommand object to create a SqlDataReader object.

Use the Read method of the SqlDataReader object to read the data.

 D. Set the SqlCommand object's CommandText to sqlQuery. Use the ExecuteXmlReader method of the SqlCommand object to create an XmlReader object.

Use the XmlReader object to read the data.

Answer: D

Explanation: You can execute SQL queries against existing relational databases to return results as XML documents rather than as standard rowsets. To retrieve results directly, use the FOR XML clause of the SELECT statement like in this scenario.

XmlReader provides non-cached, forward-only, read-only access to an XML data source, such as the XML produces by the T-SQL statement of this scenario.

Reference:

SQL Server 2000 Books Online, Retrieving XML Documents Using FOR XML .NET Framework Developer's Guide, Reading XML with the XmlReader

Incorrect Answers

- A: We must take since the data is in XML format. Furthermore, a Dataset is not required.
- **B:** DataSet.ReadXml method reads XML data into the DataSet. However, it is not necessary to use a dataset. Reading the data into a Dateset brings an unnecessary overhead.
- **C:** The SQLDateReader provides a means of reading a forward-only stream of rows from a SQL Server database. However, it operates on relational data not on XML data.

QUESTION NO: 39

You are developing an application that retrieves a list of geographical regions from a table in a Microsoft SQL Server database. The list of regions is displayed in a drop-down list box on a Windows Form.

You want to populate the list box with data from a DataSet object. You want to fill the DataSet object by using a SqlDataAdapter object.

You create a SqlConnection object named TKConnection and a SQL query string named regionSQL. You need to write the code to create the SqlDataAdapter object.

Which code segment should you use?

- A. SqlDataAdapter TKDataAdapter = new SqlDataAdapter(); TKDataAdapter.SelectCommand.Connection = TKConnection; TKDataAdapter.SelectCommand.CommandText = regionSQL;
- B. SqlDataAdapter TKDataAdapter = new SqlDataAdapter(regionSQL, TKConnection);
- C. SqlCommand SqlCmd = new SqlCommand(regionSQL); SqlDataAdapter TKDataAdapter = new SqlDataAdapter(); TKDataAdapter.SelectCommand.Connection= TKConnection; TKDataAdapter.SelectCommand = SqlCmd;
- D. SqlCommand SqlCmd = new SqlCommand(); SqlDataAdapter TKDataAdapter = new SqlDataAdapter(); SqlCmd.CommandText = regionSQL; TKDataAdapter.SelectCommand.Connection= TKConnection;

TKDataAdapter.SelectCommand = SqlCmd;

Answer: B

Explanation: The **SqlDataAdapter** (*String*, *SqlConnection*) constructor inintializes a new instance of the SqlDataAdapter class with a SelectCommand and a SqlConnection object.

Note: A SQLDataAdapter represents a set of data commands and a database connection that are used to fill the DataSet and update a SQL Server database. SqlDataAdapter is used in conjunction with SqlConnection and SqlCommand to increase performance when connecting to a Microsoft SQL Server database.

Reference: .NET Framework Class Library, SqlDataAdapter Members .NET Framework Class Library, SqlDataAdapter Constructor (String, SqlConnection) [C#]

Incorrect Answers

A: This is also a plausible solution. B) is more straightforward.

C, **D**: First we set the Adapter SelectCommand.Connection to TKConnection. But then we reset this property by setting the Adapter.SelectCommand to SqlCmd.

QUESTION NO: 40

Your Microsoft SQL Server 6.5 database contains a table named TestKPurchaseOrders that consists of more than 1 million rows.

You are developing an application to populate a DataReader object with data from TestKPurchaseOrders. You want to ensure that the application processes the data as quickly as possible.

You create a SQL SELECT statement in a local variable named TKSQLSelect. You need to instantiate a SqlConnection object and a SqlCommand object that you will use to populate the DataReader object.

Which code segment should you use?

A. OleDbConnection myConnection = new OleDbConnection (myOleDbConnectionString);
OleDbCommand TKCommand = new OleDbCommand (TKSQLSelect);
B. OleDbConnection TKConnection = new OleDbConnection (TKOleDbConnectionString);
OleDbCommand TKCommand = new OleDbCommand (TKSQLSelect, TKConnection);
C. SqlConnection TKConnection = new SqlConnection (TKSqlConnectionString);
SqlCommand TKCommand = new SqlCommand (TKSQLSelect);

```
D. SqlConnection TKConnection = new SqlConnection
    (TKSqlConnectionString);
    SqlCommand TKCommand = new SqlCommand
    (TKSQLSelect, TKConnection);
```

Answer: B

Explanation: For Microsoft SQL Server version 6.5 and earlier, you must use the OLE DB Provider for SQL Server. Furthermore, we specify both the CommandText and the OleDBConnection properties of the OleDBCommand.

Reference:

.NET Framework Developer's Guide, .NET Data Providers [C#] .NET Framework Class Library, OleDbCommand Members

Incorrect Answers

- A: We create the OleDbCommand we must specify the OleDBConnection, not just the CommandText.
- C, D: Only SQL Server 7.0, SQL Server 2000 or later can use SqlConnection.

QUESTION NO: 41

You have a DataSet object that contains a single DataTable object named TestKEmployees. TestKEmployees has a column named EmployeeID. EmployeeID contains no duplicate data.

You are creating a function that accepts a parameter of EmployeeID and searches Employees to return the DataRow object for the specified EmployeeID.

You want to use the Find method of the rows collection in Employees to return the requested DataRow object from the function. You need to ensure that you can use the Find method to accomplish this goal.

What should you do?

- A. Ensure that EmployeeID is the first column in TestKEmployees.
- B. Ensure that EmployeeID is unique for each row in TestKEmployees.
- C. Ensure that TestKEmployees has a primary key on EmployeeID.
- D. Ensure that TestKEmployees is sorted in ascending order on EmployeeID.

Answer: C

Explanation: To use the Find method, the DataTable object to which the DataRowCollection object belongs to must have at least one column designated as a primary key column.

Incorrect Answers

A: The first column has no particular significance.

B: The unique constraint is not enough. TestKEmployees must have a primary key column.

D: Sorting will not help.

QUESTION NO: 42

You have a SqlDataReader object named TKproductsDataReader. The productsDataReader object contains three columns in the following order:

- ProductID as Integer
- ProductName as nvarchar(40)
- UnitsInStock as Integer

You want to use TKproductsDataReader to create an inventory management report. You define the following three variables:

- int myProductID;
- string myProductName;
- int myUnits;

You need to ensure that the report runs as quickly as possible.

Which code segment should you use?

```
A. myProductID = (int) TKproductsDataReader[1];
  myProductName = (string) TKproductsDataReader[2];
  myUnits = (int) TKproductsDataReader[3];
B. myProductID = (int) TKproductsDataReader[0];
  myProductName = (string) TKproductsDataReader[1];
  myUnits = (int) TKproductsDataReader[2];
C. myProductID = (int) TKproductsDataReader["ProductID"];
  myProductName = (string)
     TKproductsDataReader["ProductName"];
  myUnits = (int) TKproductsDataReader["UnitsInStock"];
D. mvProductID = (int)
     TKproductsDataReader.GetOrdinal("ProductID");
  myProductName = (string)
     TKproductsDataReader.GetOrdinal("ProductName");
  myUnits = (int)
     TKproductsDataReader.GetOrdinal("UnitsInStock");
```

Answer: B

Explanation: We should use ordinal-based lookups since they are more efficient than named lookups. Column ordinals are zero-based: ProductId has ordinal number 0, myProductName has ordinal number 1, and myUnits has ordinal number 2.

Reference: .NET Framework Class Library, SqlDataReader.GetOrdinal Method [C#]

Incorrect Answers

- A: Column ordinals are zero-based, not one-based.
- C: Ordinal-based lookups are more efficient than named lookups.
- **D:** The DataReader.GetOrdinal method gets the column ordinal, given the name of the column. We are not interested in the Ordinal numbers. They should only be used to speed up the process.

QUESTION NO: 43

TestKing Ltd. receives product information from manufactures in the form of an XML documents. The product information is stored in a Microsoft SQL Server database.

The format of each XML document varies. Each one is located in a MemoryStream object named newProds.

You create a merge procedure that reads data and schema information in a DataSet object and merges the information into your database. You now need to write code to transfer the XML document and its schema into a DataSet object.

Which code segment should you use?

```
A. DataSet products = new DataSet("prodInfo");
  XmlTextReader reader = new XmlTextReader(newProds);
  XmlValidatingReader validReader = new
  XmlValidatingReader(reader);
  while (validReader.Read()) {
     products.WriteXml(validReader.Value);
  }
B. DataSet products = new DataSet("prodInfo");
  products.ReadXml(newProds);
C. DataSet products = new DataSet("prodInfo");
  XmlDataDocument document =
     new XmlDataDocument(products);
  document.DataSet.ReadXmlSchema(newProds);
D. DataSet products = new DataSet("prodInfo");
  string myXmlData =
     Encoding.UTF8.GetString(newProds.ToArrary());
  SqlDataAdapter adapter =
     new SqlDataAdapter("LoadSchemaType=XML",myXmlData);
  adapter.Fill(products)
```

Answer: B

Explanation: The ReadXml method can be used to read an XML document that includes both schema and data.

Note: If no in-line schema is specified (as in this scenario), the relational structure is extended through inference, as necessary, according to the structure of the XML document.

Reference: .NET Framework Class Library, DataSet.ReadXml Method (Stream) [C#]

Incorrect Answers

- A: The WriteXml method writes XML data, and optionally the schema, from the DataSet. We want to read data into the Dataset however.
- C: The ReadXmlSchema method is used to just read the schema from an XML document, not the data.
- **D:** We want to read the XML data and schema from a stream not from a SQL Server database. We should not use a SQlDataAdapter.

QUESTION NO: 44

Your Microsoft SQL Server database has a stored procedure named GetCompanyName. Ge accepts one parameter named @CustomerID and returns the appropriate company name.

You instantiate a SqlCommand object named TKCommand. You need to initialize TKCommand to return the company name for @CustomerID with a value of "ALFKI".

Which code segment should you use?

A.	<pre>TKCommand.CommandText = "GetCompanyName,</pre>	ALFKI";
	<pre>TKCommand.Parameters.Add("@CustomerID");</pre>	

- B. TKCommand.CommandText = "GetCompanyName"; TKCommand.Parameters.Add("GetCompanyName", "ALFKI");
- C. TKCommand.CommandText = "@CustomerID"; TKCommand.Parameters.Add("GetCompanyName", "ALFKI");
- D. TKCommand.CommandText = "GetCompanyName"; TKCommand.Parameters.Add("@CustomerID", "ALFKI");

Answer: D

Explanation: The SqlCommand.CommandText Property gets or sets the SQL statement or stored procedure to execute at the data source. Here we should set it to the name of the stored procedure: GetCompanyName.

The Parameter should contain ParameterName (here @CustomerID) and the Value (here the string ALFKI).

Note: An SqlCommand object represents a Transact-SQL statement or stored procedure to execute against a SQL Server database.

Reference:

.NET Framework Class Library, SqlCommand.CommandText Property [C#]

.NET Framework Class Library, SqlParameter Members

Incorrect Answers

- **A, C:** The CommandText should be set to the named of the stored procedure. We should not specify any parameters in the CommandText.
- **B:** The name of the parameter, not the name of the stored procedure, should be included in the parameter.

QUESTION NO: 45

You are developing an application to monitor store inventory. When inventory falls below a specified level, the application automatically generates a purchase request. Suppliers have requested that you transmit purchase requests to them in an XML document. Suppliers will accept the XML document in any valid form, except they do not want the data set definition to be included in the XML file.

You create a method named GeneratePurchaseRequest. You write the code to populate a DataSet object named myDataSet with the purchase request data. You define a variable named fileName that contains the name and path of the output file.

You need to create an XML file from the data in myDataSet by adding code to GeneratePurchaseRequest. You want to accomplish this task by writing the minimum amount of code.

Which code segment should you use?

- A. myDataSet.WriteXML(fileName, XmlWriteMode.IgnoreSchema);
- B. myDataSet.WriteXML(fileName, XmlWriteMode.WriteSchema);
- C. myDataSet.WriteXMLSchema(filename);
- D. TextWriter myWriter = new StreamWriter(fileName); myDataSet.WriteXMLSchema(myWriter);

Answer: A

Explanation: The DataSet.WriteXml method (String, XmlWriteMode) method writes data and optionally the schema to the specified file. The IgnoreSchema XmlWriteMode writes the current contents of the DataSet as XML data, without an XSD schema as was required by the suppliers.

Reference:

.NET Framework Class Library, DataSet.WriteXml Method (String, XmlWriteMode) [C#] .NET Framework Class Library, XmlWriteMode Enumeration [C#]

Incorrect Answers

B: XmlWriteMode.WriteSchema writes the current contents of the DataSet as XML data with the relational structure as inline XSD schema. However, the suppliers do not want the data set definitions.

- **C:** The DataSet.WriteXmlSchema (String) method writes the DataSet structure as an XML schema to a file. The schema includes table, relation, and constraint definitions, but not the actual data.
- **D:** The DataSet.WriteXmlSchema (Stream) method writes the DataSet structure as an XML schema to the specified System.IO.Stream object.

QUESTION NO: 46

You have a DataSet object named TKDataSet that is populated with data from a Microsoft SQL Server database. This object contains insertions, deletions, and updates to the data.

You want to apply the data changes in TKDataSet to the database. You decide to use the SqlClient data provider.

You need to create a data object that you will use to update the database.

Which code segment should you use?

- A. SqlDataReader myDataReader;
- B. SqlDataAdapter mySqlDataAdapter = new sqlDataAdapter();
- C. DataObject myDataObject = new DataObject();
- D. SqlParameter myParameter = new SqlParameter();

Answer: B

Explanation: A SqlDataAdapter represents a set of data commands and a database connection that are used to fill the DataSet and update the data source.

Reference: .NET Framework Class Library, DataAdapter Class [C#]

Incorrect Answers

- A: The SqlDataReader class provides a means of reading a forward-only stream of rows from a SQL Server database. However, we want to write the updates back to the SQL Server database.
- **C:** The DataObject class represents the object element of an XML signature that holds the data to be signed. It would not be useful here.
- **D:** Defining parameters for a SqlCommand would not be useful.

QUESTION NO: 47

You are planning to create a DataSet object named TKDataSet to be used in a bondtrading application. Several developers will need to write code to manipulate myDataSet, and you want to ensure that TKDataSet is easy for them to use. You decide to create TKDataSet as a strongly typed data set.

Which two actions should you take? (Each correct answer presents part of the solution. Choose two)

- A. Create an XSD schema that defines TKDataSet.
- B. Create an XDR schema that defines TKDataSet.
- C. Create a class for TKDataSet that is based on the schema and that inherits from the DataSet class.
- D. Create a class for TKDataSet that is based on the schema and that inherits from the XmlSchema class.
- E. Create a key pair for TKDataSet by using the Strong Name tool (Sn.exe).

Answer: A, C

Explanation:

- A: The XML Schema definition language (XSD) enables you to define the structure and data types for XML documents. Given an XML Schema that complies with the XML Schema definition language (XSD) standard, you can generate a strongly typed DataSet,
- C: The class should inherit from the DataSet class.

Reference:

.NET Framework Developer's Guide, Generating a Strongly Typed DataSet [C#]

.NET Framework General Reference, XML Schema Reference (XSD)

Incorrect Answers

- B: XML-Data Reduced (XDR) schemas are used to validate XML documents.
- **D:** The class should inherit from the DataSet class.
- **E:** The Strong Name tool (Sn.exe) helps sign assemblies with strong names. However, we are creating a DataSet not an assembly.

QUESTION NO: 48

You develop an ADO.NET application that uses a Microsoft SQL Server database and a SqlClient data provider. Your application includes the following four code segments, which are each called once:

```
SqlConnection myConnection1 = new SqlConnection();
myConnection1.ConnectionString = "Data Source=TestKServer;"
    + "Initial Catalog=Billing;Integrated Security=true";
myConnection1.Open();
```

```
SqlConnection myConnection2 = new SqlConnection();
```

```
myConnection2.ConnectionString = "Data Source=TestKServer;"
    + "Initial Catalog=Billing;Integrated Security=True";
myConnection2.Open();
```

```
SqlConnection myConnection3 = new SqlConnection();
myConnection3.ConnectionString=
    "Data Source=TestKingServerB;"
    + "Initial Catalog=Search;Integrated Security=true";
myConnection3.Open();
SqlConnection myConnection4 = new SqlConnection();
myConnection4.ConnectionString = "Data Source=TestKServer;"
```

```
+ "Initial Catalog=OrderEntry;Integrated Security=true";
myConnection4.Open();
```

You verify that your application is the only application that is using SQL Server. Your application runs all code segments by using the same identity.

You run the application. Connection pooling is enabled, and the entire application runs within the connection timeout parameter.

How many connection pools are created?

- A. One
- B. Two
- C. Three
- D. Four

Answer: C

Explanation: MyConnection1 and MyConnection2 use exactly the same connection string, while MyConnection3 and MyConnection4 use separate connections strings. The three separate connection strings will create three connections pools-

Note: When a connection is opened, a connection pool is created based on an exact matching algorithm that associates the pool with the connection string in the connection. Each connection pool is associated with a distinct connection string. When a new connection is opened, if the connection string is not an exact match to an existing pool, a new pool is created.

Reference: .NET Framework Developer's Guide, Connection Pooling for the SQL Server .NET Data Provider

Incorrect Answers

A, B; D: One connection pool will be created for each unique connection strings. Three unique connections strings are used, not 1, 2 or 4.

QUESTION NO: 49

You have a SqlDataReader object named ordersDataReader. This object contains a column named OrderQuantity that has an integer value. This object also contains one row for each order received during the previous week.

You need to write code that will process each row in ordersDataReader and pass OrderQuantity to a function named myFunction.

Which code segment should you use?

```
A. long weeklyOrderQuantity = 0;
  while (ordersDataReader.Read()) {
     myFunction((int)ordersDataReader["OrderQuantity"]);
B. long weeklyOrderQuantity = 0;
  while (ordersDataReader.NextResult()) {
     myFunction((int)ordersDataReader["OrderQuantity"]);
  }
C. long weeklyOrderQuantity = 0;
  int orderCount = 0;
  while (orderCount < ordersDataReader.FieldCount) {</pre>
     myFunction((int)ordersDataReader["OrderQuantity"]);
     orderCount++;
     ordersDataReader.Read();
  ļ
D. long weeklyOrderQuantity = 0;
  int orderCount = 0:
  while (orderCount < ordersDataReader.FieldCount) {</pre>
     myFunction((int)ordersDataReader["OrderQuantity"]);
     orderCount++;
     ordersDataReader.NextResult();
  }
```

Answer: A

Explanation: The SqlDataReader.Read method advances the SqlDataReader to the next record. The return value is true if there are more rows; otherwise, false. We can therefore use it as the condition in the while loop.

Reference: .NET Framework Class Library, SqlDataReader.Read Method [C#]

Incorrect Answers

- **B:** SqlDataReader.NextResult method advances the data reader to the next result, when reading the results of batch Transact-SQL statements. There is not a batch of Transact SQL statements in this scenario however.
- **C, D:** The SqlDataReader.FieldCount property gets the number of columns in the current row. It would be incorrect to use this value in the condition expression for the while loop.

QUESTION NO: 50

You are creating an XML Web service named ApproveService that is available only on your TestKing's intranet. The service exposes a Web method named Close that updates the status of open work orders to "closed".

You configure ApproveService to use only Integrated Windows authentication. You must ensure that access to specific functionality within the service is based on a user's membership in specific Windows groups. You want to accomplish this by using role-based security.

You want to allow all members of the Reviewers group and of the Admins group to be able to execute the Close method without creating a third group that contains members from both groups.

Which code segment should you use?

```
A.
     [PrincipalPermissionAttribute
       (SecurityAction.Demand,Role="Reviewers, Admins")]
    private void Close() {
      // Code to process the Close method goes here.
B.
     [PrincipalPermissionAttribute
       (SecurityAction.Demand, Role="Reviewers")]
    [PrincipalPermissionAttribute
       (SecurityAction.Demand, Role="Admins")]
    private void Close() {
       // Code to process the Close method goes here.
C.
   private void Close() {
       PrincipalPermission myPermission1 = new
         PrincipalPermission("Nothing", "Reviewers");
       PrincipalPermission myPermission2 = new
         PrincipalPermission("Nothing", "Admins");
       myPermission1.Demand();
       myPermission2.Demand();
        // Code to process the Close method goes here.
D.
   private void Close() {
       PrincipalPermission myPermisssion3 = new
         PrincipalPermission("Nothing", "Reviewers, Admins");
      myPermission3.Demand();
        // Code to process the Close method goes here.
    }
```

Answer: B(?)

Explanation: The user must either be a member of the Reviewers group or the Admins groups. We are not allowed to make a third group, and no solution allows us to us the Union operator to combine security permissions.

Reference: PrincipalPermission constructor (String, String) initializes a new instance of the PrincipalPermission class for the specified name and role.

Incorrect Answers

- A: The syntax Role="Reviewers, Admins" is incorrect. Only one role name can be supplied.
- C: This code would perform two separate security tests. It would only allow users that are members of both the Reviewers and the Admins group.
 Note: PrincipalPermission.Demand method determines at run time whether the current principal matches that specified by the current permission.
- **D:** The syntax of PrincipalPermission ("Nothing", "Reviewers, Admins") is incorrect. Only one role name can be supplied.

QUESTION NO: 51

TestKing provides a credit card processing application for its customers. The current application supports only computers that run on a Microsoft Windows operating system.

You are asked to rewrite the current application as a .NET application. This .NET application does not need to be backward compatible with the current application.

You must ensure that this new application meets the following requirements:

- Must support asynchronous processing.
- Must be able to pass data through firewalls.
- Must pass only SOAP-Compliant formatted data validated by using an XSD schema.
- Must not be limited to client computers running on a Microsoft operating system.

You want to accomplish this task by using the minimum amount of development effort.

Which type of .NET application should you use?

- A. Windows service
- B. XML Web service
- C. Serviced component
- D. .NET Remoting object

Answer: B Explanation: An XML Web service would:

- * support asynchronous processing.
- * XML traffic would be allowed to passed through firewalls
- * can use SOAP-compliant formatted data validated by an XSD schema.
- * could be implemented on heterogeneous systems.

Reference: Designing Distributed Applications with Visual Studio .NET, Programming the Web with XML Web Services

Incorrect Answers

- A: A Windows service can only run on a Windows computer.
- C: Serviced components cannot be run on heterogenous systems.
- **Note:** A serviced component is a class that is authored in a CLS-compliant language and that derives directly or indirectly from the System.EnterpriseServices.ServicedComponent class. Classes configured in this way can be hosted by a COM+ application and can use COM+ services.
- **D:** .NET Remoting objects can be run on different operating systems. However, a XML Web service meets the requirement in a better way.

QUESTION NO: 52

You are creating a .NET Remoting object named Payroll. The Payroll class allows remote client applications to access payroll data for your company. Client applications are developed by using Windows Forms and Web Forms.

You must ensure that remote client applications are securely authenticated prior to gaining access to Payroll object. You want to accomplish this task by writing the minimum amount of code.

What should you do?

- A. Use a TcpChannel and a BinaryFormatter for the Payroll class.
- B. Use an HttpChannel and a SoapFormatter for the Payroll class.
- C. Host the Payroll class in Internet Information Services (IIS) and implement Basic authentication.
- D. Host the Payroll class in Internet Information Services (IIS) and implement Integrated Windows authentication.

Answer: D

Explanation: Hosting the application on an IIS server configured for Windows authentication would:

- client applications are securely authentication prior to gaining access to the Class.
- miniminal coding would be required

Incorrect Answers

A: This proposed solution does not address the secure authentication requirement. Note: A TcpChannel provides an implementation for a sender-receiver channel that uses

the TCP protocol to transmit messages.

The BinaryFormatter Class serializes and deserializes an object, or an entire graph of connected objects, in binary format.

- B: This proposed solution does not address the secure authentication requirement.
 Note: A Http channel provides an implementation for a sender-receiver channel that uses the HTTP protocol to transmit messages.
 The SoapFormatter serializes and deserializes an object, or an entire graph of connected objects, in SOAP format.
- C: Basic authentication is not secure.

QUESTION NO: 53

You are creating an XML Web service named ListBoxService. This service provides content, such as states, countries, and geographical regions, for use in drop-down list boxes.

ListBoxService contains a Web method named RetrieveRegionsListBox. This method runs a DataSet object that contains every geographical region in the world.

RetrieveRegionsListBox calls a Microsoft SQL Server database to load the DataSet object with region data. You want to minimize the amount of time the method takes to return to the caller.

What should you do?

- A. Use a stored procedure to return the data.
- B. Store each DataSet object by using the Session object.
- C. Set the BufferResponse property of the WebMethod attribute to false.
- D. Set the CacheDuration property of the WebMethod attribute to an interval greater than zero.

Answer: B?

Explanation: Storing each DataSet object by using session object would increase the overhead, but it would improve the performance of the ListBoxService. **Reference:**

.NET Framework Class Library, WebMethodAttribute.CacheDuration Property [C#] .NET Framework Class Library, WebMethodAttribute.BufferResponse Property [C#]

Incorrect Answers

- A: A stored procedure is located at the SQL Server computer. It improves performance, especially if the code is run repeatedly. However, this is not the case in this scenario.
- **C:** The WebMethodAttribute.BufferResponse property gets or sets whether the response for this request is buffered. Setting the value to false would not buffer the request.
- **D:** The BufferResponse property denotes the number of seconds the response should be held in the cache. The default is 0, which means the response is not cached. Caching the response could improve performance. However, it is not the best choice.

QUESTION NO: 54

You are creating an XML Web service named ViewTestKOrders that is available to customers over the Internet. ViewTestKOrders exposes a Web method named ViewShippingDetail that requires additional security. You decide to use generic role-based security to secure ViewShippingDetail.

You need to write code to ensure that once the caller is authenticated, a user identity named Generic is created. This user identity has membership in a group named Shipping to allow access to ViewShippingDetail,

Which code segment should you use?

```
A. System.Security.Principal.IIdentity myIdentity = new
   GenericIdentity("Generic", "Custom");
  string[] Roles = {"Shipping"};
  GenericPrincipal myPrincipal = new
  GenericPrincipal(myIdentity, Roles);
  myIdentity = WindowsIdentity.GetCurrent();
B. GenericIdentity myIdentity = new
   GenericIdentity("Generic", "Custom");
  string[] Roles = {"Shipping"};
  GenericPrincipal myPrincipal = new
   GenericPrincipal(myIdentity, Roles);
  Thread.CurrentPrincipal = myPrincipal;
C. IIdentity myIdentity = new
   GenericIdentity("Generic", "Shipping");
  IPrincipal myPrincipal = new
   WindowsPrincipal((WindowsIdentity) myIdentity);
  Thread.CurrentPrincipal = myPrincipal;
D. IIdentity myGenericIdent = new
   GenericIdentity("Generic", "Custom");
  WindowsIdentity myIdentity = (WindowsIdentity)
  myGenericIdent;
  string[] Roles = {"Shipping"};
  GenericPrincipal myPrincipal = new
   GenericPrincipal(myIdentity, Roles);
  WindowsIdentity.Impersonate (myIdentity.Token);
```

Answer: B Explanation:

The **GenericIdentity** (*name type*) constructor initializes a new instance of the GenericIdentity class representing the user with the specified name and authentication type.

Parameters:

name The name of the user on whose behalf the code is running. We should use Generic

type The type of authentication used to identify the user. We should use **Custom**.

Reference:

Incorrect Answers

- **A, D:** The IIdentity interface defines the basic functionality of an identity object. However, we should use the GenericIdentity object, not the IIdentity interface.
- C: The following constructor is incorrect: GenericIdentity ("Generic", "Shipping") The second parameter should define the authentication type, not a name of a group.

QUESTION NO: 55

You develop an ASP.NET application that consumes a third-party XML Web service named CreditService. CreditService contains a Web method named ChargeCard. ChargeCard takes as input a credit card number, a billing address, and a monetary amount and returns a Boolean variable that indicates whether or not the card was changed.

Calls to ChargeCard take one minute to complete. You do not want users to have to wait while ChargeCard executes. You want users to be taken automatically to the next Web page of the application.

Which code segment should you use to call CreditService?

```
A. CreditService.ChargeCard(ccNumb, billAddress,
     Amount);
  Server.Transfer("process.aspx");
B. CreditService.ChargeCard(ccNumb,
     billAddress, amount);
  Response.Redirect("process.aspx");
C. CreditService.BeginChargeCard(ccNumb, billAddress,
     amount, new AsyncCallback(CCResponse), null);
  Server.Transfer("process.aspx");
  private void CCResponse(IAsyncResult aRes) {
     CreditService.EndChargeCard(aRes);
D. IAsyncResult AsyncResult =
     CreditService.BeginChargeCard(ccNumb, billAddress,
     amount, null, null);
  AsyncResult.AsyncWaitHandle.WaitOne();
  CreditService.EndChargeCard(AsyncResult);
  Server.Transfer("process.aspx");
```

Answer: C

Explanation: AsyncCallback provides a way for client applications to complete an asynchronous operation. This callback delegate is supplied to the client when the asynchronous operation is initiated. The event handler referenced by AsyncCallback contains program logic to finish processing the asynchronous task for the client.

Reference:

.NET Framework General Reference, Asynchronous Programming Design Pattern [C#] .NET Framework Class Library, AsyncCallback Delegate [C#]

Incorrect Answers

A, B: Asynchronous operation is not set up.D: We must use the AsyncCallback delegate.

QUESTION NO: 56

You are creating an XML Web service that will be accessed by callers who cannot use SSL encryption because if firewall restrictions. To protect sensitive data, you want to encrypt a portion of the data returned from the service by using objects in the Cryptography namespace.

The service will use a standard encryption routine to encrypt the data before it is sent to the caller. The caller will decrypt the data by using instructions provided by you.

You need to write code to encrypt the sensitive data that is in a local variable named myData. First, you create an instance of a Cryptography Service Provider.

What should you do next?

A. Create an Encryptor object that passes in a key and an initialization vector (IV) as parameters.

Call the GetHashCode method of the Encryptor object to generate a new hash code. Convert the generated hash code to a stream and use the CryptoStream object to write the value of the hash code to an encrypted stream.

Convert the output stream to a string.

B. Create a UnicodeEncoding object and use it to encode the value of myData into a byte array.

Use the ComputeHash method of the Cryptography Service Provider to create a hash from the encoded byte array.

Convert the output of ComputeHash from a byte array to a string.

C. Create a UnicodeEncoding object and use it to encode the value of myData into a byte array.

Use the GetHashCode method of the Cryptography Service Provider to create a hash from the encoded byte array.

Convert the output of GetHashCode from a byte array to a string.

D. Create an Encryptor object that passes in a key and an initialization vector (IV) as parameters.

Create a CryptoStream object that passes in an output stream and the Encryptor object as parameters.

Convert myData to a stream and use the CryptoStream object to write the value of myData to an encrypted stream.

Convert the output stream to a string.

Answer: D

Explanation: The common language runtime uses a stream-oriented design for cryptography. The core of this design is CryptoStream.

The SymmetricAlgorithm.CreateEncryptor Method creates a symmetric encryptor object with the current Key and initialization vector (IV). We then use this encryptor object and pass it to stream. The stream will then be encrypted. The value of myDate can be written to the encrypted stream by the send, and the receiver can retrieve it and decrypt it to a string.

Reference:

.NET Framework Developer's Guide, Encrypting Data [C#]

.NET Framework Class Library, CryptoStream Class [C#]

.NET Framework Class Library, SymmetricAlgorithm.CreateEncryptor Method [C#]

Incorrect Answers

- A: The Encryptor object will be required when setting up the CryptoStream. We cannot use a hash code of the Encryptor object.
- **B**, **C**: UniEncoding is used to convert characters between the Unicode and ASCII standards. UniEncoding is not used for encryption.

QUESTION NO: 57

You have a .NET Remoting object named TKProductLoader. The TKProductLoader class is a server-activated Singleton object.

The TKProductLoader class loads product data into a Microsoft SQL Server database. The Load method of the TKProductLoader class is a time-consuming method to call.

You are developing a client application that uses the TKProductLoader class. You want to ensure that the client application can continue to respond to user input while the Load method of the TKProductLoader class is called.

What should you do?

- A. Use an AsyncDelegate instance to call the Load method.
- B. Modify the TKProductLoader class to be derived from IAsyncResult.
- C. Configure the TKProductLoader class to be a client-activated .NET Remoting object.
- D. Configure the client application to have its own remoting channel that matches the server's channel and formatter.

Answer: A

Explanation: Asynchronous executation will enable the caller to continue to execute. One of the innovations provided by the asynchronous pattern is that the caller decides whether a particular call should be asynchronous. It is not necessary for a called object to do additional programming for supporting asynchronous behavior by its clients; asynchronous delegates provide for this in the pattern.

Reference: .NET Framework Developer's Guide, Asynchronous Design Pattern Overview

Incorrect Answers

- **B:** Incomplete solution.
- C: Remoting objects do not meet the requirements of this scenario.
- **D:** Channels are just a way to communicate.

QUESTION NO: 58

TestKing buys and sells used refrigerators. External vendors frequently send you XML documents that list one type of used appliances for sale. The documents that you receive contain either only washers or only refrigerators as in the following example.

All incoming XML documents are loaded into a MemorySystem object named usedList.

You need to automate a process that will discover XML documents contain refrigerator elements. As soon as you ascertain that a document contains refrigerators, you can stop processing the document.

You decide to use Visual studio .NET to develop an application that will contain a Boolean variable named hasRefrigerator. A value of True for this variable means that a document contains refrigerator elements. A value of false means that it does not. You want to ensure that the discovery process occurs as quickly as possible.

What should you do?

A.	Create an XmlDocument object and load it from usedList. Use the SelectSingleNode method to search the XmlDocument object for the
	saleList/refrigerators node. If this node is found, set hasRefrigerator to True.
	Otherwise, set hasRefrigerator to False.
B.	Create an XmlXPathDocument object and load it from usedList. Use an XPathNavigator object to search the XmlXPathDocument for the saleList/refrigerators node.

If this node is found, set hasRefrigerator to **True.** Otherwise, set hasRefrigerator to **False.**

- C. Create an XmlTextReader object on usedList. Loop through usedList by using the MoveToContent method of the XmlTextReader object and comparing for the saleList/refrigerators node. If this node is found, set hasRefrigerator to **True**. Otherwise, set hasRefrigerator to **False**.
- D. Create a DataSet object and use its ReadXml method to load usedList into the object.
 If the Count property of the Rows collection of the "refrigerators" entry in the object is not equal to zero, set hasRefrigerator to True.
 Otherwise, set hasRefrigerator to False.

Answer: A.

Explanation: The SelectSingleNode method selects the first XmlNode that matches the XPath expression. If no nodes match the query, it returns Null. This suggested procedure would meet the requirements of this scenario. Furthermore, this would be the fastest solution.

Note: An XMLDocument object represents an XML document and enables the navigation and editing of this document.

Reference: .NET Framework Class Library, XmlNode.SelectSingleNode Method [C#]

Incorrect Answers

- **B:** There is no such thing as a XmlXPathDocument.
- **C:** XmlReader provides forward-only, read-only access to a stream of XML data. The MoveToContent method can be used on a XmlReader stream to provide a possible solution in this scenario. However, it would be fastest solution.

Note: The MoveToContent method checks whether the current node is a content (nonwhite space text, CDATA, Element, EndElement, EntityReference, or EndEntity) node. If the node is not a content node, the reader skips ahead to the next content node or end of file.

D: This proposed solution is not straightforward, and is therefore slow.

QUESTION NO: 59

You create an XML web service that retrieves data from Microsoft SQL Server database. You instantiate a SqlConnection object named TKConnection and set the Max Pool Size property of the connectionString to 50.

All 50 connections are now in use. However, a request for connection number 51 is received.

What is the most likely result?

- A. An exception is immediately thrown.
- B. The current connection pool is expanded by 50 additional connections.
- C. A new connection pool is created that has the same maximum number of connections.
- D. The request is queued until a connection becomes available or until the timeout limit is reached.

Answer: D

Explanation: The **Max Pool Size** property denotes the maximum number of connections allowed in the pool. If the maximum pool size has been reached and no usable connection is available, the request is queued. The object pooler satisfies these requests by reallocating connections as they are released back into the pool. If the time-out period elapses before a connection object can be obtained, an error occurs.

Reference: .NET Framework Developer's Guide, Connection Pooling for the SQL Server .NET Data Provider

Incorrect Answers

- A: An exception is only thrown after the request has been queued and after the timeout limit is reached.
- **B:** The maximum number of concurrent connections has been reached. No further connections would be allowed at the moment.
- **C:** No new connection pool is created.

QUESTION NO: 60

You have a strongly types DataSet object named TKDataSet. This object contains three DataTable objects named Customers, Orders and OrderDetails.

Customers and Orders have a data column named CustomerID. Orders and OrderDetails have a data column named OrderID.

Orders have a foreign key constraint between Customers and Orders on CustomerID. OrderDetails has a foreign key constraint between Orders and OrderDetails on OrderID.

You want to populate Customers, Orders and OrderDetails with data from Microsoft SQL Server database.

In which order should you fill the Data table objects?

- A. Customers OrderDetails Orders
- B. OrderDetails Orders Customers
- C. Customers Orders OrderDetails
- D. Orders OrderDetails Customers

Answer: C

Explanation: We most populate the tables that are references by the foreign-key constraints first, namely the Customers and the Orders table. We should populate the OrderDetails table last.

TestKing Illustrative Diagram



Incorrect Answers

- **A B:** There would be no corresponds rows in the Orders table if we populate the OrderDetails table before the Orders table.
- **D:** There would be no corresponds rows in the Customers table if we populate the OrderDetails table before the Customers table.

QUESTION NO: 61

You have a DataSet object named TKDataSet. This object contains two DataTable objects named Customers and Orders. Customers has a column named CustomerID, which is unique to each customer. Orders also has a column named CustomerID. You want to use the GetChildRows method of the DataRow object to get all orders for the current customers.

What should you do?

- A. Add a foreign key constraint on CustomerID of Orders between Customers and Orders.
- B. Add a data relation to TKDataSet on OrderID between Customers and Orders.
- C. Create a unique constraint on CustomerID of Customers.
- D. Create a primary key on CustomerID of Customers.

Answer: B

Explanation: The GetChildRows Method use a DataRelation to retrieve the child rows of this DataRow using the specified DataRelation. In this scenario we would be required to add a data relation between the two tables.

Note: A Datarelation represents a parent/child relationship between two DataTable objects.

TestKing Illustrative Diagram



Reference:

.NET Framework Class Library, DataRow.GetChildRows Method (DataRelation) [C#] .NET Framework Class Library, DataRelation Class [C#] Visual Database Tools, Foreign Key Constraints

Incorrect Answers

- A: A foreign key constraint works in conjunction with primary key or unique constraints to enforce referential integrity among specified tables. However, the GetChildRows method uses a DataRelation, not a foreign key constraint.
- **C:** A unique constraint on CustomerID of Customers would only make sure that the CustomerID column will have unique values.
- D: A primary key constraint would ensure that CustomerID column will have unique values.

QUESTION NO: 62

Your company frequently receives product information from external vendors in the form of XML data. You receive XML document files, an .xdr schema file, and an .xsd schema file.

You need to write code that will create a typed DataSet object on the basis of product information. Your code will be used in several Visual studio .NET applications to speed up data processing.

You need to create this code as quickly as possible.

What should you do?

- A. Create the code manually.
- B. Use XmlSerializer.Serialize to generate the code.
- C. Use the XmlSerializer.Deserialize to generate the code.
- D. Use the Xml Schema Definition tool (Xsd.exe) to generate the code.

Answer: D

Explanation: The XML Schema Definition tool generates XML schema or common language runtime classes from XDR, XML, and XSD files, or from classes in a runtime assembly. The code would be produced quickly.

Reference: .NET Framework Tools, XML Schema Definition Tool (Xsd.exe) .NET Framework Class Library, XmlSerializer Class [C#]

Incorrect Answers

- A: Manually creating code would be tedious.
- **B:** The XmlSerializer.Serialize is used to produce XML documents from objects. It is the wrong way around.
- **C:** At run time XML documents can be deserialized into run time objects with the XmlSerializer.Deserialize method. However, we would have to manually produce this code.

QUESTION NO: 63

You are debugging a visual studio .Net application named TestKingApp. TestKingApp produces an Xml documents object and then consumes the same object. This object moves data in the application. The object has no schema, but it contains a declaration line that you must inspect.

You decide to transform the XML code and its declaration into a string for easy inspection.

What should you do?

A. Assign the ToString method of the Xml Document object to a string variable.

- B. Assign the outerXml property of the Xml document object to a string variable
- C. Assign the outerXml property of the Xml document element property of the Xml document object to a string variable.
- D. Use the writecontentTo method of the XmlDocument object to write the document into a MemoryStream object. Use the GetXml method of the DataSet object to get a string version of the document.

Answer: B

Explanation: The XmlNode.OuterXml property gets the markup representing this node and all its children.

Reference: .NET Framework Class Library, XmlNode.OuterXml Property [C#]

Incorrect Answers

- A: The ToString method returns a String that represents only the current Object.
- C: There is no XmlDocument element property.
- **D:** This proposed solution is complicated. Furthermore the GetXml method of the DateSet object cannot be used on a stream.

QUESTION NO: 64

You are developing a order-processing application that retrieves data from a Microsoft SQL Server database named TestKingData that contains a table named Customers and a table named Orders.

Customer has a primary key of customerID. Each row in orders has a CustomerID that indicates which customer placed the order.

Your application uses a DataSet object named ordersDataSet to capture customer and order information before it applied to the database. The ordersDataSet object has two Data Table objects named Customers and Orders.

You want to ensure that a row cannot exist in the Orders Data Table object without a matching row existing in the customers Data Table object.

Which two actions should you take? (Each correct answer presents part of the solution. Choose two.)

- A. Create a foreign key constraint named constraintOrders that has orders.CustomersID as the parent column and Customers. CustomerID as the child column.
- B. Create a foreign key constraint named ConstraintCustomers that has Customers.CustomerID as the parent column and Orders.CustomerID as the child column.

- C. Create a unique constraint named uniqueCustomers by using the Customers.CustomerID
- D. Add ConstraintOrders to the Orders Data Table.
- E. Add ConstraintOrders to the Customer Data Table.
- F. Add ConstraintCustomers to the Orders Data Table.
- G. Add ConstraintCustomers to the Customers Data Table.
- H. Add UniqueCustomers to the Customers Data Table.

Answer: B, F

Explanation:

- **B:** The parent column is located in the table on the "one-side", while the child column is located on the "many-side". Here the Customers table is the parent domain and Orders is the child domain: each Customer can have several orders, but for each specific order there must exists exactly one corresponding row in the Customers table. We should use the ConstraintsCustomers constraints.
- **F:** The constraint must be added to the Orders table.

TestKing Illustrative Diagram



Incorrect Answers

A: This is incorrect. The parent column must be CustomerID in the Customers table.

- **B**, **D**: The ConstraintCustomers constraint must be used, not ConstraintOrders.
- C, F: A unique constraint only applies to one single table.
- E: The constraint must be added to the Orders table.

QUESTION NO: 65

You have DataSet object named LoanCustomersDataSet that contains customers serviced by the loan department of your company. You receive a second DataSet that contains customers serviced by the asset management department of your company. Both objects have the same structure.

You want to merge assetCustomersDataSet into LoancustomersDataSet and preserve the original values in loanCustomerDataSet.

Which code segment should you use?

- A. loanCustomersDataSet.Merge (assetCustomersDataSet);
- B. loanCustomersDataSet.Merge (assetCustomersDataSet, True);
- C. assetCustomersDataSet.Merge (loanCustomersDataSet);
- D. assetCustomersDataSet.Merge (loanCustomersDataSet, True);

Answer: B

Explanation: The DataSet.Merge method merges this DataSet with a specified DataSet. The data will be merged into the dataset on which the Merge method is applied. We want to merge into our Dateset, namely the loanCustomerDataSet. Furthermore, we want to preserve the original values in loanCustomerDataSet.

The Boolean parameter is the preserveChanges. PreserveChanges indicates a value indicating whether changes made to the current DataSet should be maintained. It should be true, if changes should be maintained, like in this scenario.

Reference: .NET Framework Class Library, DataSet.Merge Method (DataSet, Boolean) [C#]

Incorrect Answers

A The PreserveChanges parameter must be set to true.

C, D: We must merge into loanCustomerDataSet, not into the Dataset that we have received.

QUESTION NO: 66

You create an XML Web service named TKService. You must ensure that this service meets the following URL authorization requirements.

- Anonymous access must be disabled for TKService.
- An authenticated user named User1 cannot access TKService.
- All other authenticared users can access TKService.

You configure Internet Information Services (IIS) to meet these requirements. You now need to configure the authorization section in the Web.config file to properly authorize the users.

Which code segment should you use?

- A. <allow users="*" /> <deny users="User1" />
- B. <allow users="?" /> <deny users="User1" />
- C. <deny users="*" /> <deny users="User1" /> <allow users="?" />
- D. <deny users="?" /> <deny users="User1" /> <allow users="*" />

Answer: D

Explanation: The elements are applied in order one by one. The first matching element decides whether the user should be granted access or not.

Step 1: We deny access permissions to anonymous users with <deny users="?" />

Step 2: We deny access to User1 with <deny users="User1" />

Step 3: We allow access for all other users with <allow users=""*" />

Note:

Identity

Description

- * Refers to all identities
- ? Refers to the anonymous
 - identity

Reference: .NET Framework Developer's Guide, ASP.NET Authorization

Incorrect Answers

- A: All users are allowed access. We must deny before we allow.
- **B:** All anonymous users are allowed access.
- C: All users are denied access.

QUESTION NO: 67

You are creating an XML Web service that tracks employee information. The service contains a Web method named RetrieveEmployees. The service also contains a base class named Employee and two classes named Manager and Engineer, which are derived from Employee.

RetrieveEmployees takes a roleID as input that specifies the type of employee to retrieve, either Manager or Engineer. RetrieveEmployees returns an array type Employee that contains all employees that are in the specified role.

You want to ensure that Manager and Engineer object types can be returned from RetrieveEmployees.

What should you do?

- A. Set the TypeName property of the XmlType attribute to **Employee** for both Manager and Engineer.
- B. Apply two XmlInclude attributes to RetrieveEmployees, one of type Manager and one of type Engineer.
- C. Apply an XmlRoot attribute to the Employee class Apply an XmlAttribute attribute to the Manager and Engineer classes.
- D. Apply an XmlRoot attribute to the Employee class Apply an XmlElement attribute to the Manager and Engineer classes.

Answer: B

Explanation: The XmlIncludeInclue alows the XmlSerializer to recognize a type when it serializes or deserializes an object. We specify the two types as XmlInclude attributes to our serialzer RetrieveTestKingEmployees.

Reference:

.NET Framework Class Library, XmlIncludeAttribute Class .NET Framework Class Library, XmlRootAttribute Class

Incorrect Answers

- A: The XmlAttributes.XmlType property gets or sets an object that specifies how the XmlSerializer serializes a class to which the XmlTypeAttribute has been applied.
- C: The XMLRoot attribute is not useful here.
 Note: The XmlRootAttribute identifies a class, structure, enumeration, or interface as the root (or top-level) element of an XML-document instance.*
 The XmlAttributes.XmlAttribute property gets or sets an object that specifies how the XmlSerializer serializes a public field or public read/write property as an XML attribute.
- D: The XMLRoot attribute is not useful here.
 Note: The XmlAttribute Indicates that a public field or property represents an XML element when the XmlSerializer serializes or deserializes the containing object.

QUESTION NO: 68

Your Microsoft SQL Server database contains a table named TestKOrders. TestKOrders is used to store new purchase orders as they are entered into an orderentry application. To keep up with customer demand, the order fulfillment department wants to know at 15-minute intervals when new orders are entered.

You need to develop an application that reads TestKOrders every 15 minutes and sends all new orders to the order fulfillment department. The application will run on computer that is used by several users who continuously log on and log off from the network to perform miscellaneous tasks.

Which type of .NET application should you use?

- A. Windows Form
- B. Windows service
- C. XML Web service
- D. .NET Remoting object

Answer: B Explanation: A Windows service would still be running even though users logs on and off.

Incorrect AnswersA: A Windows Form would be closed when a user logs off.C: An XML Web service is not guaranteed to keep running if a user logs off.

D: You can use .NET Remoting to enable different applications to communicate with one another. However, a remoting object would be destroyed when a user logs off the system.

QUESTION NO: 69

You are using Visual Studio .NET to develop a new application to replace an older COM-based application. The new application will use some of the old COM components until they can be replaced by Visual Studio .NET code.

Your application uses a COM DLL named TestKingCOM.dll. The Visual Studio .NET assembly for TestKingCOM.dll must be named OurDotNetCOM. You must use the name "ProjectX" for the namespace of the COM components. You must ensure that your application uses these naming guidelines.

What should you do?

- A. Reference TestKingCOM.dllfrom Visual Studio .NET. Change the assembly name in Solution Explorer. Change the namespace name by editing the assembly.
- B. Reference TestKingCOM.dllfrom Visual .NET. Change the assembly name in Solution Explorer. Change the namespace name by using the Namespace property of a CodeNamespaceImport object.
- C. Run the Type Library Importer (Tlbimp.exe) with the /namespace and /out options to create the assembly.
- D. Run the Type Library Importer (Tlbimp.exe) with the /out option to create the assembly.

Change the namespace by using the Namespace property of a CodeNamespaceImport object.

Answer: C

Explanation: The Type Library Importer converts the type definitions found within a COM type library into equivalent definitions in a common language runtime assembly. We should use the /namespace option to specify the namespace in which to produce the assembly. We must use the /out option to specify output file, assembly, and namespace in which to write the metadata definitions.

Reference: .NET Framework Tools, Type Library Importer (Tlbimp.exe)

Incorrect Answers

- A: Not a practical solution.
- **B:** An incomplete solution.
- **D:** We should use the /namespace option to specify the namespace in which to produce the assembly.

QUESTION NO: 70

You create a serviced component named BankTransfer. BankTransfer is in a COM+ application named TestKing Bank. BankTransfer is secured by using the SecurityRole attribute for the Tellers and Managers roles.

You want members of the TestKingBankTellers group to be assigned to the Tellers role. What should you do?

- A. Add another SecurityRole attribute to the BankTransfer class for the TestKingBankTellers group.
- B. Modify the Tellers SecurityRole attribute on the BankTransfer class to include the TestKingBankTellers group.
- C. Use the Component Services tool to add a new role named TestKingBankTellers.
- D. Use the Component Services tool to add the TestKingBankTellers group to the existing Tellers role.

Answer: D

QUESTION NO: 71

As a developer at TestKing you are creating a serviced component that will perform several distributed transactions across different databases. The serviced component will be called from managed and unmanaged client applications.

You create a new class library project. You write code in the class modules to implement the logic.

You want to detect and correct any registration errors before any client applications use the component.

What should you do next?

- A. Assign a string name to the assembly. Compile the assembly. Run the .NET Services Installation tool (Regsvcs.exe) to add the component to Component Services.
- B. Run the Type Library Exporter (Tlbexp.exe) to export the definition for the assembly.
- C. Assign a string name for the assembly. Compile the assembly.Run the Global Assembly Cache tool (Gacutil.exe) to add the component to the global assembly cache.
- D. Use the Assembly Registration tool (Regasm.exe) to create entries in the registry that describe the assembly.

Answer: A

Explanation: The .NET Services Installation tool performs loads and registers an assembly, generates, registers, and installs a type library into a specified COM+ 1.0 application, and configures services that you have added programmatically to your class.

Reference: .NET Framework Tools, .NET Services Installation Tool (Regsvcs.exe)

Incorrect Answers

- **B:** The Type Library Exporter generates a type library that describes the types defined in a common language runtime assembly.
- **C:** The Global Assembly Cache tool allows you to view and manipulate the contents of the global assembly cache and download cache.
- **D:** The Assembly Registration tool reads the metadata within an assembly and adds the necessary entries to the registry, which allows COM clients to create .NET Framework classes transparently.

QUESTION NO: 72

You have a .NET Remoting object named TKBatchOrder. The TKBatchOrder class allows remote client applications to submit orders in batches.

Each TKBatchOrder object holds state information that is specific to each remote client application. The TKBatchOrder class has overloaded constructors for initializing an object.

You want to develop a server application to host TKBatchOrder objects. What should you do?

- A. Create a Windows service, and register TKBatchOrder as a client-activated object.
- B. Create a Windows service, and register TKBatchOrder as a server-activated Singleton object.
- C. Host TKBatchOrder in Internet Information Services (IIS) and create a Web.config file to register TKBatchOrder as a server-activated SingleCall object.
- D. Host TKBatchOrder in Internet Information Services (IIS) and create a Web.config file to register TKBatchOrder as a server-activated object with an infinite lease.

Answer: A

Explanation: Client-activated objects are objects whose lifetimes are controlled by the calling application domain. This is the appropriate solution in this scenario.

Reference:

.NET Framework Developer's Guide, Client Activation .NET Framework Developer's Guide, Server Activation

Incorrect Answers

- **B**, **C**: Singleton types never have more than one instance at any one time. If an instance exists, all client requests are serviced by that instance.
- **D:** Server-activated objects with an infinite lease would not be appropriate.

QUESTION NO: 73

You have a .NET Remoting object named Promotions. The Promotions class allows remote client applications to add new product promotions to an online catalog application. The Promotions class is an assembly file named TestKing.dll. You have an Internet Information Services (IIS) virtual directory named PromotionsObject. The TestKing.dll file is in the PromotionsObject\bin directory. You want to host the Promotions class in IIS. What should you do?

```
A. Create a Web.config file that includes the following code segment:
<appSettings>
         <add key="activation" value="wellknown"/>
</appSettings>
<httpHandlers>
         <add verb="*" path="Promotions.rem"
         type="TestKing, Promotions"/>
</httpHandlers>
B. Create a Web.config file that includes the following code segment:
<appSettings>
         <add key="activation" value="wellknown"/>
         <add key="mode" value="SingleCall"/>
</appSettings>
<httpHandlers>
         <add verb="*" path="Promotions.rem"
         type="TestKing, Promotions"/>
<httpHandlers>
C. Create a Web.config file that includes the following code segment:
<configuration>
         <system.runtime.remoting>
                   <application>
                             <service>
                                     <wellknown>
                                             mode="SingleCall"
   objectUri="Promotions.rem"
                                             type="Promotions, TestKing"/>
                              </service>
                              <channels>
                                      <channel ref="http"/>
                              </channels>
                   </application>
         </system.runtime.remoting>
</configuration>
D. Create a Web.config file that includes the following code segment:
<configuration>
         <system.runtime.remoting>
                   <application>
                              <service>
                                     <wellknown
                                            mode="SingleCall"
         objectUri="Promotions.rem"
                                             type="Promotions, TestKing"/>
                              </service>
                              <channels>
                                      <channel ref="tcp" port="8080">
                                             <serverProviders>
                                                    <formatter ref="soap"/>
                                              </serverProviders>
```

```
</channel>
</channels>
</application>
</system.runtime.remoting>
<configuration>
```

Answer: C

Explanation: The HTTP channel does not require a custom-written listener because IIS provides the listening functionality. Advantages of using IIS as the HTTP listener include: ease of configuration, scalability, and process recycling.

Reference: Visual Studio Samples: Fitch and Mather 7.0, .NET Remoting

Incorrect Answers

- **A**, **B**: These are inadequate since we want to host the application on the IIS server. We must, for example, configure channels.
- **D:** TCP channel would require development of an extra listener to process the request that enters the TCP channel.

QUESTION NO: 74

You are creating an XML Web service that will consist of a class named Stock. Stock will expose the following public fields:

Symbol, CompanyName, and CurrentPrice.

When serialized by the XMLSerializer, stock will take the following form:

```
<Stock symbol=">
```

```
<Company />
<CurrentPrice />
```

</Stock>

You need to construct the Stock class. Which code segment should you use?

```
<XmlAttributeAttribute("symbol")>_
Public Symbol As String
<XmlElementAttribute("Company")>_
Public CompanyName As String
Public CurrentPrice As Double
End Class
D. Public Class Stock
<XmlAttributeAttribute()>_
Public Symbol As String
<XmlElementAttribute()>_
Public CompanyName As String
<XmlElementAttribute()>_
Public CurrentPrice As Double
End Class
```

Answer: C

Explanation: XmlAttributeAttribute("symbol") specifies that *symbol* will be serialized as an XML attribute.

Then we defined a XML element with the XmlElementAttribute("company")

Note: XML serialization is the process of converting an object's public properties and fields to a serial format, XML for example, for storage or transport.

Reference: .NET Framework Developer's Guide, Attributes that Control XML Serialization

Incorrect Answers

- A: We should use the XmlAttributeAttribute for symbol.
- **B:** We should use the **XmlAttribute** for *symbol*.
- D: Company, not CompanyName, should be defined as an XML element.

QUESTION NO: 75

As a software develop at TestKing Inc. you are creating an XML Web service named HousingService that exposed two Web methods name SearchHouse and BuyHouses. Prior to deploying the service, you want to customize the default template that is displayed when a customer makes a request through the browser.

You create a Web Form named HousingServiceDescription.aspx that is a customized version of the default template. You place the Web Form in the bin directory of the HousingService project.

The Web Form needs to override the default template when a request is made. You need to ensure that customers who request HousingService though a browser view HousingServiceDescription.aspx.

What should you do?

A. Create a SOAP extension to redirect the user to HousingServiceDescription.aspx.

- B. Set the Namespace property of the WebService attribute to the location of HousingServiceDescription.aspx.
- C. In the Web.config file, enable tracing and the set TraceMode node to bin\HousingServiceDescription.aspx.
- D. In the Web.config file, set the HRef property of the wsdlHelpGenerator node to bin\HousingServiceDescription.aspx.

Answer: D

Explanation: The wsdlHelpGenerator element specifies the XML Web service Help page (an .aspx file) that is displayed to a browser when the browser navigates directly to an ASMX XML Web services page

Reference: .NET Framework General Reference, <wsdlHelpGenerator> Element

Incorrect Answers

- A: Soap extensions are used to inspect or modify a message at specific stages in message processing on either the client or the server. It is not useful here.
- **B:** We are not interested in defining a name space.
- **C:** We are not interested in enabling tracing.

QUESTION NO: 76

You are creating an XML Web service named LegalService. This service exposes two Web methods named SendMessage and ReceiveMessage.

SendMessage is used to send highly confidential messages to its customers.

ReceiveMessage is used to receive highly confidential messages from its customers and to process these messages for future use.

You need to ensure that these messages cannot be intercepted and viewed by anyone other than LegalService and the customers who access LegalService. Which security mechanism should you use?

- A. SSL
- B. Authorization
- C. Authentication
- D. Impersonation

Answer: A

Explanation: Secure Sockets Layer (SSL) meets the requirements of this scenario. SSL encrypts data, which protects the data from being viewed from outside parties.

Incorrect Answers

- **B:** Authorization is used to assign permissions and rights to users. It is not used to secure transmitted data.
- C: Authentication is used to identify users. It is not enough to secure the data transmitted.

D: Impersonation is the ability of a to execute in a security context other than from that of the original user-It would not help protecting the transmitted data however.

QUESTION NO: 77

You are creating an XML Web service named TKWebService. Callers must be authenticated by using credentials passed in the SOAP header of each Web service call. You want to use role-based security to secure each method on TKWebService. The roles that users are assigned are stored in a custom database table. You need to write code that will allow you to dynamically change which roles can execute specific methods at run time.

What should you do?

- A. Create a WindowsIdentity object and a WindowsPrincipal object. Then implement declarative role-based security.
- B. Create a WindowsIdentity object and a WindowsPrincipal object. Then implement imperative role-based security.
- C. Create a GenericIdentity object and a GenericPrincipal object. Then implement declarative role-based security.
- D. Create a GenericIdentity object and a GenericPrincipal object. Then implement imperative role-based security.

Answer: D

Explanation: The GenericIdentity class in conjunction with the GenericPrincipal class to create an authorization scheme that exists independent of a Windows NT or Windows 2000 domain. Furthermore, we should use imperative role-based security to allow dynamic permissions that are decide at runtime.

Reference: .NET Framework Developer's Guide, Creating GenericPrincipal and GenericIdentity Objects [Visual C#]

Incorrect Answers

- **A, B:** WindowsPrincipal allows code to check the Windows group membership of a Windows user. However, in this scenario we are creating a customized security scheme and have no use of WindowsPrincipal objects.
- **C:** Declarative role-based security would not allow dynamic permissions that are decide at runtime.

QUESTION NO: 78

You create an XML Web service named TestKing1. You use the Debug.Assert method in your code to verify parameter values and ranges.

You find that Service1 does not display assertion failure messages. Instead, TestKing1 returns an HTTP 500 error message when an assertion fails. You want to view the assertion failure messages.

What should you do?

- A. Modify the Web.config file to stop the Debug.Assert method from displaying a message box.
- B. Modify the compilation element of the Web.config file by setting the debug attribute to "true".
- C. In the constructor for TestKing1, set the Debug.AutoFlush property to false.
- D. In the constructor for TestKing1, add an EventLogTraceListener object to the Listeners property of the Debug class.

Answer: B

Explanation: To set debug mode for an ASP.NET application, you must edit the application's Web.config configuration file. More specifically the following attribute must be added to the compilation element: debug="true"

Reference:

Visual Studio, Debug Mode in ASP.NET Applications .NET Framework Class Library, Debug Members

Incorrect Answers

- A: No messages boxes are displayed.
- **C:** Setting AutoFlush to true means that data will be flushed from the buffer to the stream. It would not affect the problem at hand, however.
- **D:** The Listeners property of the debug class is a read only property. An EventLogTraceListener object cannot be added to the Listeners property of the Debug class.

QUESTION NO: 79

You are creating a serviced component named ItemTKInventory. An online catalog application will use ItemTKInventory to display the availability of products in inventory.

Additional serviced components written by other developers will continuously update the inventory data as orders are placed.

The ItemTKInventory class includes the following code segment:

<Transaction(TransactionOption.Required)> _ Public Class ItemTKInventory Inherits ServicedComponent ' Method code goes here.

End Class

ItemInventory is configured to require transactions. You want ItemInventory to respond to requests as quickly as possible, even if that means displaying inventory values that are not up to date with the most recent orders.

What should you do?

- A. To the ItemTKInventory class, add the following attribute: <ObjectPooling(True)>
- B. To all methods of the ItemTKInventory class, add the following attribute: <AutoComplete(False)>
- C. Modify the Transaction attribute of the ItemTKInventory class to be the following attribute:
 - <Transaction(TransactionOption.Required, Timeout:=1)>
- D. Modify the Transaction attribute of the ItemTKInventory class to be the following attribute:

```
<Transaction(TransactionOption.Required, _
IsolationLevel:=
TransactionIsolationLevel.ReadUncommitted)>
```

Answer: D

Explanation: The ReadUncommitted transaction isolation level makes a dirty read is possible, meaning that no shared locks are issued and no exclusive locks are honored. This will reduce the number of locks, compared to the default transaction isolation level of readcommitted. Reduced number of locks will increase the performance.

Reference: .NET Framework Class Library, IsolationLevel Enumeration

Incorrect Answers

- A: Object pooling is a COM+ service that enables you to reduce the overhead of creating each object from scratch. However, object pooling is not much use in transactions.
- **B:** Autocomplete does not apply here.
- C: Timeout configuration would not address performance issue.

QUESTION NO: 80

You are creating an XML Web service named myWebService. This service will be used to exchange highly confidential information over the Internet with your company's business partner named TestKing, Inc.

You want only callers from TestKing, Inc., to be able to access myWebService. You do not want to have to accept a user name and password from callers.

Once callers are authenticated, you want to use Windows user accounts to authorize access to the Web methods exposed by the Web service. You set up two Windows user accounts named TestKingAssociate and TestKingManager. You need to configure myWebService to meet these security requirements.

Which type of authentication should you use?

- A. Basic
- B. Digest
- C. Anonymous
- D. Client Certificate

Answer: D

Explanation: Client certificate authentication meets the requirements of this scenario:

- would only allow specific users to gain access
- no username or password would be required.

Incorrect Answers

- **A, B:** Basic authentication and Digest Authentication would require a user name and a password from the callers.
- C: Anonymous access would allow public access.

QUESTION NO: 79

You create an XML Web service named ReportService for an application on your TestKing's intranet. You configure Internet Information Services (IIS) and ReportService to use Integrated Windows authentication.

You configure the Access Control List (ACL) for ReportService to allow access to only members of a Windows group named FieldAgents. You test and confirm that only members of the FieldAgents group can use ReportService.

ReportService includes a method named SubmitSurveillance that calls a serviced component named ReportData. ReportData uses COM+ role-bases security to restrict component access to members of the COM+ Agents role. The COM+ Agents role is configured to include the FieldAgents group.

You call SubmitSurveillance. However, when the call to ReportData is attempted, an exception is thrown indicating that access is denied. You need to correct this problem. What should you do?

- A. In IIS, enable Anonymous access.
- B. In the <system.web> section of the Web.config file, add the following line of code: <identity impersonate="true"/>

Answer: B

Explanation: We must allow impersonation to allow the COM+ Agents role to be used, if they the FieldAgent group is running the ReportService.

Note: Impersonation is when ASP.NET executes code in the context of an authenticated and authorized client.

Reference: .NET Framework General Reference, <identity> Element

Incorrect Answers

- A: Anonymous access would be a security risk.
- C: We should allow, not deny, impersonation.
- **D:** Authentication mode none, specifies that no authentication. Only anonymous users are expected.

QUESTION NO: 80

Your Microsoft SQL Server database TestKingBackOrders contains a table that consists of more than 1 million rows. You need to develop an application that reads each row in the table and writes the data to a flat file. The application will run only once each day. You want the application to process the data as quickly as possible. Which class should you use to retrieve the data?

- A. DataSet
- B. DataTable
- C. DataReader
- D. DataAdapter

Answer: C

Explanation: The ADO.NET DataReader is used to retrieve a read-only, forward-only stream of data from a database. Using the DataReader can increase application performance and reduce system overhead because only one row at a time is ever in memory. DataReader would meets the requirements of this scenario.

Reference: .NET Framework Developer's Guide, Retrieving Data Using the DataReader [C#]

Incorrect Answers

- A: Datasets is used when you want to work with a set of tables and rows while disconnected from the data source. It would not be optimal when accessing the amount of data in this scenario. Furthermore, only read-forward access is required.
- **B:** A Data table represents one table of in-memory data.
- **D:** The DataAdapter serves as a bridge between a DataSet and a data source for retrieving and saving data.

QUESTION NO: 81

Your Microsoft SQL Server database contains a table named Customers. Customers contains three columns named FamilyName, PersonalName, and Address.

You instantiate a SqlCommand object named TKCommand that you will use to populate a DataReader object named customersDataReader. You need to initialize TKCommand to load customersDataReader to include FamilyName and PersonalName for all rows in Customers.

Which code segment should you use?

- A. TKCommand.CommandText = "SELECT FamilyName,"_& "PersonalName FROM Customers";
- B. TKCommand.CommandType = "SELECT FamilyName,"_& "PersonalName FROM Customers");
- C. TKCommand.Parameters.Add("SELECT FamilyName,"_& "PersonalName FROM Customers");
- D_{\cdot} TKCommand.ExecuteNonQuery();

Answer: A

Explanation: The CommandText property gets or sets the Transact-SQL statement or stored procedure to execute at the data source. We should use it to set the SQL command we want to be executed.

Reference: .NET Framework Class Library, SqlCommand Members

Incorrect Answers

- **B:** The CommandType property gets or sets a value indicating how the CommandText property is to be interpreted.
- **C:** The parameters should include the SQL code.
- **D:** We must the SQL Statements before we execute them.

QUESTION NO: 82

You are developing an application that queries a Microsoft SQL Server database. The application will package the results of the query as XML data. The XML data will be retrieved directly from the database and transmitted electronically to a business partner.

The query must retrieve all rows and all columns from a database table named TestKingCustomers.

Which query should you use?

- A. SELECT * FROM TestKingCustomers FOR XML AUTO
- B. SELECT * FROM XML FROM TestKingCustomers
- C. SELECT * FROM TestKingCustomers as XMLDATA
- D. SELECT * FROM OPENXML('<TestKingCustomers'.'/Root/Customer', 1) with (CustomerID varchar(10))

Answer: A

Explanation: You can execute SQL queries against existing SQL Server relational databases to return results as XML documents rather than as standard rowsets. To retrieve results directly, use the FOR XML clause of the SELECT statement like in this scenario.

Reference: SQL Server 2000 Books Online, Retrieving XML Documents Using FOR XML

Incorrect Answers

B, C: Incorrect syntax.D: We should produce XML, not read from a XML data source.

QUESTION NO: 83

You are developing an application that receives product information from external vendors in the form of XML documents. The information will be stored in a Microsoft SQL Server database.

The application must validate all incoming XML data. It uses an XmlValidatingReader object to read each XML document. If any invalid sections of XML are encountered, the inconsistencies are listed in a single document.

You must ensure that the validation process runs as quickly as possible. What should you do?

- A. Set the ValidationType property of the XmlValidatingReader object to Schema.
- B. Set the CanResolveEntity property of the XmlValidatingReader object to True.
- C. Create and register a ValidationEventHandler method.
- D. Use a try/catch block to catch validation exceptions.

Answer: C

Explanation: There are two exception events that can occur during schema validation: warnings and errors. To handle errors and warnings, the Schema Object Model (SOM) supports the use of a ValidationEventHandler delegate, which is a callback that you design. This callback is called when an error or warning occurs during validation.

Reference:

.NET Framework Developer's Guide, Validation and the Schema Object Model [C#]

Incorrect Answers

- A: The ValidationType Schema validates according to XSD schemas. However, there is no schema in this scenario. Furthermore, we must provide a mechanism that handles the errors.
- B: The XmlReader.CanResolveEntity Property is read-only.
 Note: CanResolveEntity Property gets a value indicating whether this reader can parse and resolve entities.
- D: It would be very awkward to use try/catch blocks. It would be less effective as well.

QUESTION NO: 84

As a software developer at TestKing you are creating an XML Web service named DistributionService. This service must be able to access and manipulate data in a table named Inventory in a Microsoft SQL Server database.

Some functions within Distribution Service need the inventory data to be exposed as XML data. Other functions within DistributionService need the inventory data to be exposed as a DataSet object.

You need to create the object that will provide this data access. Which object should you use?

- A. XmlDocument
- B. XmlDocumentFragment
- C. XPathDocument
- D. XmlDataDocument

Answer: D

Explanation: XmlDataDocuments allows structured data to be stored, retrieved, and manipulated through a relational DataSet. XMLDataDocuments enables you to load either relational data or XML data and manipulate that data

Reference: NET Framework Class Library, XmlDataDocument Class [C#]

Incorrect Answers

A: XmlDocument does not support relational data.

B: An XmlDocumentFragment object represents a lightweight object that is useful for tree insert operations.

C: XPathDocument provides a fast and performant read-only cache for XML document processing.

QUESTION NO: 85

You create an XML Web service that uses the Trace class to output error messages, warning messages, and informational messages to a log file. The service uses a TraceSwitch object to filter the trace output.

The DisplayName property of the TraceSwitch object is "TestKingSwitch". On a development computer, all trace output appears in the log file.

You move the service to a production computer. You must configure the production XML Web service to output only error messages to the log file. What should you do?

- A. To the Web.config file, add the following code segment: <system.diagnostics> <switches> <add name="TestKingSwitch" value="1" /> </switches> </system.diagnostics>
- B. To the Web.config file, add the following code segment:

```
<system.diagnostics> <switches> <add
name="TestKingSwitch" value="TraceSwitch" /> </switches>
</system.diagnostics>
```

Answer: A

Explanation: In the Web.config file we should specify the name of the switch (TestKingSwitch) and the appropriate Tracelevel through the value attribute.- Tracelevel correspond to the values 1 through 4. Tracelevel 1 only displays error messages.

Note: A switch provides an efficient mechanism for controlling tracing and debugging output at run time using external settings. The Switch class implements default behavior for switches, allowing you to change the switch level at run time.

Reference: .NET Framework Class Library, Switch Class [C#] Visual Basic and Visual C# Concepts, Trace Switches

Incorrect Answers

- **B:** Incorrectly the value attribute is set to "TraceSwitch". Valid Tracelevel values are 1 through 4.
- **C**, **D**: We should specify the name of the switch with a name attribute in the Web.config file. We must specify TestKingSwitch, not TraceSwitch.

QUESTION NO: 86

You create an XML Web service named TestKing1 that exposed your company's inventory data. This data is used by other companies to place orders. TestKing1 must conform to existing formatting standards for inventory data.

You deploy TestKing1. You discover that some client applications are rejecting your XML formatting because the XML is inconsistent with the expected standard. You want to debug this problem by tracing the XML responses. What should you do?

- A. In the Web.config file, enable tracing by setting the enabled attribute of the trace element to **"true"**.
- B. Inside each Web method, use the Debug class to write the contents of the inherited Context.Response property to a log file.
- C. Create a SOAP extension to log the SoapMessageStage.AfterSerialize output to a log file.

D. On each Web method, use the SoapHeader attribute to map all SOAP headers to a member variable for the TestKing1 class.Then use the Trace.WriteLine method to log the headers to a log file.

Answer: C

Explanation: The AfterSerialize stage occurs after a SoapMessage is serialized, but before the SOAP message is sent over the wire. Logging the output of this stage is useful in this scenario.

Reference: .NET Framework Class Library, SoapMessageStage Enumeration [C#]

QUESTION NO: 87

You create an XML Web service that provides stock information to the customers of TestKing Inc. You successfully test the service. You are now ready to deploy the service to a new virtual directory on a production computer.

You want to deploy the service without having to manually configure any settings on the production computer.

Which deployment mechanism should you use?

- A. FTP
- B. Xcopy command
- C. Web setup project
- D. Copy Project command

Answer: C

Explanation: Using deployment to install files on a Web server provides an advantage over simply copying files, in that deployment handles any issues with registration and configuration automatically.

Reference: Visual Studio, Deployment of a Web Setup Project

Incorrect Answers

- A: Download files through FTP would require manual registration and configuration.
- **B:** Just copying the files would require manual registration and configuration.
- **D:** Copying a project, rather than deploying it, is the simpler way to move your project's content to a target Web server. However, copying does not automatically configure Internet Information Services (IIS) directory settings.

QUESTION NO: 88

You are creating an XML Web service that processes credit card information. This service will be consumed by computers that run on Microsoft Windows operating systems, as well as computers that run on other operating systems.

You must ensure that client credentials passed to the service are secure and cannot be compromised. You are not as concerned with the length of time that Web method calls take to maintain this level of security. You need to configure authentication for this service.

Which type of authentication should you use?

- A. Basic
- B. Forms
- C. Client Certificate
- D. Integrated Windows

Answer: C

Explanation: Client certificates can be used on both Windows and non-Windows systems. Client certificates provide a secure connection.

Note: Client Certificates is used for secure identification of clients in Internet and intranet scenarios. It requires each client to obtain a certificate from a mutually trusted certificate authority.

Reference: .NET Framework Developer's Guide, Securing XML Web Services Created Using ASP.NET [C#]

Incorrect Answers

- A: Basic authentication is not secure. Login name and password are transferred unencrypted in clear text.
- **B:** Forms authentication is not supported by XML Web services. It is a system by which unauthenticated requests are redirected to an HTML form using HTTP client-side redirection.
- D: Integrated Windows authentication can only be used on Windows computers.

QUESTION NO: 89

You create an XML Web service named TKService. This service exposes a Web method named MyMethod. You need to register TKService in UDDI. First, you add a new business name and a new tModel. You now need to list a valid access point to TKService. Which URL should you use?

- A. http://TestKingSrv/AppPath/myService
- B. http://TestKingSrv/AppPath/myService=wsdl
- C. http://TestKingSrv/AppPath/myService.asmx
- D. http://TestKingSrv/AppPath/myService.asmx?MyMethod

Answer: C

Explanation: XML Web services are access through Web browser using an URL. The URL to access an XML Web service has the format:

http://servername/apppath/webservicename.asmx

The XML Web service's HTML description file is displayed. The XML Web service's HTML description page shows you all the XML Web service methods supported by a particular XML Web service, including a valid access to the method.

Note: The UDDI (Universal Description, Discovery and Integration) specifications define a standard way to publish and discover information about XML Web services. The XML schemas associated with UDDI define four types of information that would enable a developer to use a published XML Web service. These are: business information, service information, binding information, and information about specifications for services.

Reference: .NET Framework Developer's Guide, Accessing XML Web Services from a Browser [C#]

Incorrect Answers

- A: The .asmx extension must be specified as well.
- **B:** Use of Web Services Description Language (WSDL) is not required (and the syntax is incorrect as well).
- **D:** This is not the format used to access a method within a XML Web service. The format to directly access an method within a service is: http://servername/appath/webservicename.asmx/Methodname?parameter=value

QUESTION NO: 90

You are creating a serviced component named TKComponent that will be distributed to your customers. You are also creating a setup project that will register the component in the global assembly cache on each customer's computer.

You anticipate that there will be future updates to TKComponent that you will provide to your customers. All updates to TKComponent will be backward compatible. You will create similar setup projects for each update of TKComponent that will register the updated assembly in the global assembly cache.

You need to ensure that any applications on your customers' computer that reference TKComponent use the most recent version of the component.

Which action or actions should you take? (Choose all that apply)

- A. Sign TKComponent by using a strong name.
- B. Compile TKComponent as a satellite assembly.
- C. Include a publisher policy file that is registered in the global assembly cache on your customer's computers.
- D. Increment the assembly version for each update of TKComponent.
- E. Add an application configuration file to TKComponent that includes assembly binding information that redirects prior versions to the updated version.

Answer: A, C, D Explanation:

- A: We must use a strong name for TKComponent. Note: You cannot redirect versions for assemblies that are not strong-named. The common language runtime ignores the version for assemblies that are not strong-named.
- **C:** Vendors of assemblies can state that applications should use a newer version of an assembly by including a publisher policy file with the upgraded assembly. In this scenario a publisher policy can be used since the newer versions of the component will be backward compatible.
- **D:** We must make sure that we increment the assembly version for each update of the component.

Reference: .NET Framework Developer's Guide, Redirecting Assembly Versions

Incorrect Answers

B: A satellite assembly is not required.

Note: By definition, satellite assemblies only contain resource files. They do not contain any application code. In the satellite assembly deployment model, you create an application with one default assembly (which is the main assembly) and several satellite assemblies.

E: An application configuration file can be used redirect one version of an assembly to another. However, it is not the preferred solution and is mostly used for non-backward compatible components.

QUESTION NO: 91

You have an application named MyApp that contains a reference to version 1.0.0.0 of a strongly named serviced component named TestKingComponent. This component is located in the bin directory of MyApp.

You receive version 2.0.0.0 of TestKingComponent, which you install in the global assembly cache. You reconfigure the application configuration file to redirect calls to version 2.0.0.0.

You now receive version 3.0.0.0 of TestKingComponent, which you install in the global assembly cache. You do not reconfigure the application configuration file. You then run MyApp.

Which version of TestKingComponent is loaded and from which location is it loaded?

- A. Version 1.0.0.0 from the bin directory.
- B. Version 2.0.0.0 from the global assembly cache.
- C. Version 2.0.0.0 from the bin directory.
- D. Version 3.0.0.0 from the global assembly cache.

Answer: B

Explanation: The runtime uses the following steps to resolve an assembly reference:

1. Determines the correct assembly version by examining applicable configuration files, including the application configuration file, publisher policy file, and machine configuration file.

In this scenario the application configuration file states that Version 2.0.0.0 should be used.

- 2. Checks whether the assembly name has been bound to before and, if so, uses the previously loaded assembly.
- 3. Checks the global assembly cache. If the assembly is found there, the runtime uses this assembly.
 - In this scenario Version 2.0.0.0 is installed in the Global assembly cache.
- 4. Probes for the assembly using additional steps.

Reference: .NET Framework Developer's Guide, How the Runtime Locates Assemblies

Incorrect Answers

- A: The application configuration file states that version 2.0.0.0 should be used.
- C: The global assembly cache is checked first.
- **D:** The application configuration file states that version 2.0.0.0 should be used. Newer versions will not be considered.

QUESTION NO: 92

You are using Visual Studio .NET to develop an application named TestKingApp. You have a common business logic component that was created in COM that you want to use until you can replace it with Visual Studio .NET code.

You create the Visual Studio .NET solution for the new application. You want to use the COM component in your Visual Studio .NET solution.

What should you do?

- A. Register the COM component by using Regsvr32.exe.
- B. Run the Type Library Exporter (Tlbexp.exe) and pass the COM component as the filename parameter.
- C. Use Visual Studio .NET to add a reference to the COM component.
- D. Run the Assembly Registration tool (Regasm.exe) and pass the COM component as the filename parameter.

Answer: D

Explanation: To register or unregister a .NET class with COM, you must run a commandline tool called the Assembly Registration Tool (Regasm.exe). Regasm.exe adds information about the class to the system registry so COM clients can use the .NET class transparently.

Reference:

.NET Framework Developer's Guide, Registering Assemblies with COM .NET Framework Tools, .NET Framework Tools

Incorrect Answers

- A: Regsrv32 is not required in Visual Studio .NET. Regsrv32 was used for Visual Basic 6.0, and for Visual C++ 6.0 components.
- **B:** Tlbexp.exe generates a type library from a common language runtime assembly. Tlbexp.exe generates a type library but does not register it. This is in contrast to the Assembly Registration tool (Regasm.exe), which both generates and registers a type library. To generate and register a type library with COM, use Regasm.exe.
- C: This is not enough to ensure interoperability.

QUESTION NO: 93

You are creating an XML Web service named StockService. The service contains a Web method named RetrieveStockInfo.

RetrieveStockInfo takes as input a stock symbol and returns a DataSet object that contains information about that stock. You want to capture all incoming SOAP messages in RetrieveStockInfo and write the messages to a file for future processing.

What should you do?

- A. Enable sessions in RetrieveStockInfo.
- B. Create a SOAP extension for RetrieveStockInfo.
- C. Apply a SoapHeader attribute to RetrieveStockInfo.
- D. Apply a SoapRpcMethod attribute to RetrieveStockInfo.

Answer: B

Explanation: The ASP.NET SOAP extension architecture revolves around an extension that can inspect or modify a message at specific stages in message processing on either the client or the server. A SOAP extension would allow the capture and processing of SOAP messages.

Reference: .NET Framework Class Library, SoapExtension Class

Incorrect Answers

- A: Would not help.
- **C:** SoapHeader is applied to an XML Web service method or an XML Web service client to specify a SOAP header the Web service method or XML Web service client can process.
- **D:** Applying the SoapRpcMethodAttribute to a method specifies that SOAP messages sent to and from the method use RPC formatting. This would not help in capturing the SOAP messages however.

QUESTION NO: 94

You are creating an XML Web service named InventoryService for a nationwide clothing retailer company TestKing Inc. The service provides near real-time inventory information to individual store managers by using a virtual private network (VPN).

InventoryService exposes a Web method named RetrieveInventory that returns inventory information to the caller. You configure Internet Information Services (IIS) and InventoryService to use Integrated Windows authentication.

You need to write code in InventoryService to ensure that only members of the Manager group can access RetrieveInventory.

What should you do?

- A. To the <authorization> section of the Web.config file, add the following element: <allow roles="Manager" />
- B. To the <authorization> section of the Web.config file, add the following element: <allow users="Manager" />
- - ' Code to retrieve inventory data goes here.
- D. In RetrieveInventory, add the following code segment:

Answer: A

Explanation: We should use the authorization element of the Web.config file to allow the Manager group with the <allow roles="Manager" /> element.

Reference: NET Framework General Reference, <authorization> Element

Incorrect Answers

- **B:** This proposed solution would allow the user name Manager access, not the group.
- **C:** The Name property gets the user's Windows logon name. We cannot compare this to a group name.
- **D:** The proposed solution is incorrect. The AuthenticationType cannot be equal to "Manager".

QUESTION NO: 95

You develop an application named TestKingApp that uses a Windows Form, a Microsoft SQL Server database, and several database components. You want to restrict users from writing their own applications to access TestKingApp's database components.

You need to configure your database component assemblies to accomplish this goal.

What should you do?

- A. Apply the StrongNameIdentityPermission attribute, and specify SecurityAction.LinkDemand.
 Set the PublicKey property to the public key of the key file you use to sign your application's assemblies.
- B. Apply the StrongNameIdentityPermission attribute, and specify SecurityAction.RequestMinimum.
 Set the PublicKey property to the public key of the key file you use to sign your application's assemblies.
- C. Apply the PublisherIdentityPermission attribute, and specify SecurityAction.Deny.
- D. Apply the PublisherIdentityPermission attribute, and specify SecurityAction.RequestMinimum.

Answer: B

Explanation: The RequestMinimum security action is used to request for the minimum permissions required for code to run. We use the PublicKey property and the public key of our software certificate to protect the assembly.

Reference:

.NET Framework Class Library, SecurityAction Enumeration

Incorrect Answers

- A: A link demand causes a security check during just-in-time compilation and only checks the immediate caller of your code.
- **C, D:** The PublisherIdentityPermission represents the identity of a software publisher. However, we have not specified the specified the software publisher. A certificate must be used.

QUESTION NO: 96

You are creating a .NET Remoting object named BankOps. BankOps exposes methods for creating, finding, and modifying objects in a class named BankCustomer. BankCustomer has a large number of read/write properties.

You expect a large number of remote client applications to frequently connect to BankOps. You expect these remote client applications to use many of the BankCustomer properties. You want to ensure that network traffic is minimized.

What should you do?

- A. Add the Serializable attribute to the BankCustomer class.
- B. Implement the IDisposable interface in the BankCustomer class.
- C. Derive the BankCustomer class from ContextBoundObject.
- D. Derive the BankCustomer class from MarshalByRefObject.

Override the inherited InitializeLifetimeService method to return null.

Answer: A

Explanation: Making the Class Serializable would make the properties available. The easiest way to make a class serializable is to mark it with the Serializable attribute. **Note:** The basic idea of serialization is that an object should be able to write its current state, usually indicated by the value of its member variables, to persistent storage. Later, the object can be re-created by reading, or deserializing, the object's state from the storage.

Reference:

.NET Framework Class Library, MarshalByRefObject Class

Incorrect Answers

- B: The IDisposable interface defines a method to release allocated unmanaged resources.
- C: A context is a set of properties or usage rules that define an environment where a collection of objects resides. The rules are enforced when the objects are entering or leaving a context. Objects that reside in a context and are bound to the context rules are called context-bound objects.
- **D:** A MarshalByRefObjec enables access to objects across application domain boundaries in applications that support remoting.

The InitializeLifetimeService method obtains a lifetime service object to control the lifetime policy for this instance.