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Total No of Questions:-342

Question: 1

You are creating a Windows Form that contains several ToolStrip controls.
You need to add functionality that allows a user to drag any ToolStrip control from one edge of the form to another.
What should you do?

- A. Configure a ToolStripContainer control to fill the form.
Add the ToolStrip controls to the ToolStripContainer control.
- B. Configure a Panel control to fill the form.
Set the Anchor properties of the ToolStrip controls to Top, Bottom, Left, Right.
- C. Add a ToolStrip controls to another ToolStrip control that is hosted by a ToolStripControlHost control.
- D. Add the ToolStrip controls to the form.
Set the Anchor properties of the ToolStrip controls to Top, Bottom, Left, Right.
Set the FormBorderStyle property of the form to SizableToolWindow.

Answer: A

Question: 2

You need to create a Windows Forms application that uses a nonrectangular form as its user interface.
What should you do?

- A. Set the FormBorderStyle property of the form to None.
Set the BackgroundImage property of the form to a bitmap file that represents the shape you want form to take.
Set the TransparencyKey property to the background color of the bitmap file.
- B. Set the FormBorderStyle property of the form to None.
Set the BackgroundImage property of the form to a bitmap file that represents the shape you want the form to take.
Set the TransparencyKey property to Transparent.
- C. Set the FormBorderStyle and BackgroundImageLayout properties to None.
Set the BackgroundImage property of the form to a bitmap file that represents the shape you want the form to take.
Set the TransparencyKey property to Transparent.
- D. Set the FormBorderStyle property to None and the BackColor property to Control.
Set the BackgroundImage property of the form to a bitmap file that represents the shape you want the form to take.
Set the TransparencyKey property to Transparent.

Answer: A

Question: 3

You create a Windows Forms application. Your application executes a background thread. You need to construct the thread to exit, but you also need to notify the main thread when the background thread has ended. What should you do?

- A. Call the Abort method of the thread.
- B. Call the Interrupt method of the thread.
- C. Call the Join method of the thread.
- D. Call the Sleep method of the thread.

Answer: C

Question: 4

You are creating a Windows Forms application that uses a drag-and-drop operation to enable users to copy customer data between a ListBox control and RichTextBox control. The ListBox displays a list of customer Ids to the user. Each item in the ListBox is associated with a custom external data type named CustomerData. The data type stores the customer name along with other customer information, including the address and postal code. You need to ensure that when the user drags a customer name from the ListBox to the RichTextBox all of the information in your custom data type is moved into the RichTextBox. What should you do?

- A. Initiate the drag-and-drop operation in the MouseDown event for the ListBox. Call the DoDragDrop method for the ListBox, passing in an instance of CustomerData. Use the GetFormats method in the DragEnter event for the RichTextBox to access the custom data type.
- B. Initiate the drag-and-drop operation in the MouseDown event for the ListBox. Call the DoDragDrop method for the ListBox, passing in an instance of CustomerData. Use the GetData method in the DragDrop event for the RichTextBox to access the custom data type.
- C. Initiate the drag-and-drop operation in the MouseDown event for the ListBox. In the DragEnter or DragDrop events for the RichTextBox, set the Effect property to DragDropEffects.All. Use the GetFormats method in the DragEnter event for the RichTextBox to access the custom data type.
- D. Initiate the drag-and-drop operation in the MouseDown event for the ListBox. In the DragEnter or DragDrop events for the RichTextBox, set the Effect property to DragDropEffects.All. Use the GetDataPresent method in the DragEnter event for the RichTextBox to access the custom data type.

Answer: B

Question: 5

You are creating multiple-document interface (MDI) Windows Forms application. You need to configure the main form to function as the parent form and a second form to

function as the child form.
What should you do?

- A. Set the IsMdiContainer property of the parent form to True.
Set the MdiParent property of the child form to the parent form.
- B. Set the IsMdiContainer property of the parent form to True.
Set the Parent property of the child form to the parent form.
- C. Add the child form to the Controls collection of the parent form.
Set the MdiParent property of the child form to the parent form.
- D. Add the child form to the Controls collection of the parent form.
Set the Parent property of the child form to the parent form.

Answer: A

Question: 6

You are adding accessibility functionality to a custom, owner-drawn control named Legend. You create a class named AccessibleLegend, which is derived from the AccessibleObject class. The Legend control overrides the GetChild method and returns an AccessibleLegend object. You need to ensure that when the Legend control is disabled, the control still returns the appropriate value for the State property of the AccessibleLegend object. Which value should you configure the State property to return?

- A. AccessibleStates.Invisible
- B. AccessibleStates.Protected
- C. AccessibleStates.ReadOnly
- D. AccessibleStates.Unavailable

Answer: D

Question: 7

You are creating a Windows Forms application. Your application uses a custom control. The Custom control is based on a standard button control. You add several extra properties to the control. Some of these properties are read-only. You need to ensure that the read-only properties are not displayed in the Properties window of the design environment. What should you do?

- A. Decorate the read-only properties by using the EditorBrowsable attribute, and then set the EditorBrowsable attribute to EditorBrowsableState.Never.
- B. Use the DesignTimeVisible attribute, and then set the DesignTimeVisible attribute to False.
- C. Decorate the read-only properties by using theBrowsable attribute, and then set theBrowsable attribute to False.
- D. Decorate the read-only properties by using the DisplayName attribute, and then set the DisplayName attribute to null.

Answer: C

Question: 8

You create a custom control by extending a standard TextBox control. The custom control adds a new property called ValidationColor.

You need to ensure that users can select the color for the ValidationColor property from the Properties window at design time by using the color action palette that is available for other standard Windows Forms controls.

What should you do?

- A. Create a custom context menu that contains the chosen color palette and logic. Implement the IContainerControl interface for your control.
- B. Create a custom dialog box that contains the chosen color palette and logic. Configure the FormBorderStyle property of the dialog box to None. Implement the IContainerControl interface for your control, and use its ActivateControl method to activate the dialog box.
- C. Create a custom dialog box that contains the chosen color palette and logic. Configure the FormBorderStyle property of the dialog box to None. In the Set method of your property, write code to instantiate the dialog box and return the selected value.
- D. Declare the type of the property as System.Drawing.Color.

Answer: D

Question: 9

You created a custom Windows Forms control that contains width, Height, and SquareFootage properties. The SquareFootage property contains the multiplied value of Width and Height.

You need to make SquareFootage visible, while disabling it in the property grid.

What should you do?

- A. Apply the NotSerialized() attribute to the SquareFootage property.
- B. Apply the DesignerSerializationVisibility() attribute to the SquareFootage property, and pass in a value of DesignerSerializationVisibility.Content as a parameter.
- C. Apply the EditorBrowsable attribute to the SquareFootage property, passing in a value of EditorBrowsableState.Never as a parameter.
- D. Implement the property by using only a Get accessor.

Answer: D

Question: 10

You are customizing a Windows Form. You want to display a custom icon for your composite control named DialerControl in the toolbox.

You need to customize the toolbox icon. You want to achieve this goal by using the minimum amount of effort.

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

- A. Add a bitmap named DialerControl.bmp to the user control project.

- B. Change the build action of the bitmap to Embedded Resource.
- C. Add a ToolboxBitmap attribute to the DialerControl class, passing in DialerControl.bmp as a parameter.
- D. Add a ToolboxBitmap attribute to the DialerControl class, passing in typeof(DialerControl) as a parameter.

Answer: A, B

Question: 11

You create a new custom control by extending a standard TextBox control.
You need to replace the default icon for the control with your own custom icon.
What are two possible ways to achieve this goal? (Each correct answer presents a complete solution. Choose two.)

- A. Add the bitmap file that contains the custom icon to the custom control project.
Set its BuildAction property to Compile in the properties window.
- B. Add the bitmap file that contains the custom icon to the custom control project.
Decorate the control class with the ToolboxBitmap attribute, and specify the location of the bitmap file for the icon.
- C. Add the bitmap file that contains the custom icon to the custom control project.
Give the bitmap file the same name as your control class, and use the .bmp or .ico file name extension.
Set its BuildAction property to EmbeddedResource in the Properties window.
- D. Add the bitmap file that contains the custom icon to the custom control project.
Give the bitmap file the same name as your control class, and use the .bmp or .ico file name extension.
Set the Copy to Output Directory property of the bitmap to Copy always.

Answer: B, C

Question: 12

You are creating a Windows Form that includes print functionality. The form includes a PrintDocument control. A PrintPage event handler contains code that renders the form data to a default printer.
You need to display a preview of the printed document along the lower edge of the form.

- A. Set the PrinterSettings.PrinterName property of the PrintDocument control to Preview.
- B. Add a second PrintDocument control to your form.
Set the PrintController property of the PrintDocument type to a new instance of the PreviewPrintController type.
- C. Add a PrintPreviewControl control to your form.
Set the PrinterSettings.PrinterName property of the PrintDocument control to the Name property of the PrintPreviewControl control.
- D. Add a PrintPreviewControl control to your form.
Set the Document property of the PrintPreviewControl control to the existing PrintDocument instance.

Answer: D

Question: 13

You are creating a Windows Forms application that manages document creation. You need to display a customized print preview of the document that show within the main form. You want the customized view to display without the standard print preview user control. What should you do?

- A. Use the PrintPreviewDialog component.
Set the Document property to the document to be printed.
Use the ShowDialog method to display the control.
- B. Use the PrintPreview control.
Set the Document property to the document to be printed.
- C. Use the PrintPreviewDialog component.
Set the Document property of the control to the document to be printed.
Use the Show method to display the control.
Use the MainMenuStrip property to configure the user controls you want.
- D. Use the PrintPreview control.
Set the Name property to the name of the document to be printed.

Answer: B

Question: 14

You are creating a Windows Forms application. Users need to preview print jobs before printing from the application. You added a PrintDocument component and PrintPreviewDialog component to the form. You need to configure the application to allow users to preview print jobs. You want to achieve this goal by using the minimum amount of effort. Which three action should you perform? (Each correct answer presents part of the solution. Choose three.)

- A. Set the PrintPreviewDialog.Document property to the PrintDocument component instance.
- B. Add a PrintDialog component to the form.
- C. Set the PrintDialog.Document property to the PrintDocument component instance.
- D. Create an event handler for the PrintDocument.PrintPage event.
- E. Call the PrintDialog.ShowDialog method.
- F. Call the PrintPreviewDialog.ShowDialog method.

Answer: A, D, F

Question: 15

You are modifying an existing installation package for your application. Your application requires Microsoft Windows Server 2003 and will not run on Microsoft Windows 2000 Server. You add the following condition to the primary output of your installer.
VersionNT >= 502

Users who previously attempted to install your application on Windows 2000 Server report that they still cannot install your application after than upgrade to Windows Server 2003.

You need to ensure that users who upgrade the operating system on their servers to meet your launch condition can successfully ..install your application.
What should you do?

- A. Set the Transitive property of the primary output to True.
- B. Change the UpgradeCode property of your Setup application.
- C. Set the Vital property of the primary output to True.
- D. Change the launch condition of your primary output to VersionNT >= 500.

Answer: A

Question: 16

You created a custom action for your Windows setup application. The custom action runs a standard Console application at the end of the installation process. You place the custom action in the Install node of the Custom Actions tree in the Custom Actions Editor. The Console application executable performs correctly when run as a stand-alone application. However, when you run the Microsoft Windows Installer package that was created by your setup application, the custom action does not run. Everything else works fine. You need to ensure that the console application runs during the install. What should you do?

- A. Set the InstallerClass property of your custom action to False.
- B. Place the custom action in the Commit node of the Custom Action tree rather than in the Install node.
- C. Set the DetectNewerInstalledVersion property for your setup application True.
- D. Set the InstallAllUsers property for your setup application to True.

Answer: A

Question: 17

You are configuring a ClickOnce deployment that allows users to install your application from the Internet zone under partial trust permission. You want the application to access data that resides on the same remote server from the application is installed.

You need to add one of more types of data access that are allowed under partial trust permissions to your application.

Which type or types of data access are allowed? (Choose all that apply.)

- A. data access through HTTP with System.Net.WebClient
- B. data access through XML Web services
- C. data access through System.Data.SqlClient
- D. data access through HTTP with System.Net.HttpWebRequest

Answer: A, B, D

Question: 18

You want to create a custom installer component to install your Windows-based application on client computers.

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

- A. Inherit from the Installer class.
- B. Inherit from the AssemblyInstaller class.
- C. Add the RunInstallerAttribute to your derived class and set it to True.
- D. Add the InstallerTypeAttribute to your derived class and set it to CustomInstaller.
- E. Register the installer.
- F. Override the install, Commit, Rollback, and Uninstall methods as required.

Answer: A, C, F

Question: 19

You are creating an installation package for a .Net Framework application.

You need to configure your installation package to add a shortcut to the user's desktop during installation. Which editor in the setup project should you use?

- A. File Types Editor
- B. User Interface Editor
- C. Custom Action Editor
- D. File System Editor

Answer: D

Question: 20

You are creating a Windows Forms application. You want the installer to display an HTML document that contains important information after users install your application.

You need to configure your application to display the HTML document.

What should you do?

- A. Set the SupportUrl property of your primary output to the path of the HTML document.
- B. Create a Custom Install Action that calls the Process.Start method, passing in the path of the HTML document as the fileName parameter.
- C. Set the PostBuild event of your installation project to the path of the HTML document.
- D. Create a Custom Commit Action that calls the Process.Start method, passing in the path of the HTML document as the fileName parameter.

Answer: D

Question: 21

DRAG DROP

You are creating a ClickOnce application that requires elevated permissions by default.

You need to identify the default security zones for each deployment location.

Which default security zone is appropriate to use in each deployment location?

All answer, drag the appropriate security zones to the correct deployment locations in the answer area. Each security zone can be used more than one.

Answer:

Question: 22

You are creating a Windows Forms application. The application displays data from a Microsoft SQL Server 2005 database in a DataGridView control. The DataGridView control is populated by a data table. The data table is filled by using a SqlDataAdapter object.

You need to display changes to the database as they happen without polling the database.

What should you do?

A. Create a SqlDependency object and bind it to a SqlCommand object that is used by the SqlDataAdapter object.

Reload the dataset in an event handler that is registered for the OnChanged event of the SqlDependency object.

B. Use a TransactionScope block when calling the Fill method of the SqlDataAdapter object.

C. Set the CommandTimeout property of the SqlCommand object that is used by the SqlDataAdapter object to -1.

D. Reload the data table in an event handler that is registered for the RowChanging event of the DataTable object.

Answer: A

Question: 23

A method in your Windows Forms application executes a stored procedure in a Microsoft SQL Server 2005 database, and then executes a second stored procedure in a second SQL Server 2005 database.

You need to ensure that the call to the first stored procedure writes changes only if the call to the second stored procedure succeeds.

Destination requirements prohibit you from introducing new components that use the COM+ hosting model.

What should you do?

A. Implement a transactional serviced component.

Add methods to this component to encapsulate the connect operation and execution of each stored procedure.

Register and use this serviced component.

B. Add a TransactionScope block.

Connect to each database and execute each stored procedure within the TransactionScope block.

Call the TransactionScope.Complete method if the call to both stored procedure succeeds.

C. Connect to both databases.

Call the SqlConnection.BeginTransaction method for each connection.

Call the SqlTransaction.Commit method on both returned transactions only if both stored

procedures succeed.

D. Add a try-catch-finally block.

Connect to each database and execute each stored procedure into the try block.

Answer: B

Question: 24

A Windows Forms application programmatically creates the schema for a dataset. The dataset includes a data table named Departments. The Departments table includes columns named DepartmentID and DepartmentName.

You need to ensure that the Departments table assigns a unique integer value to the DepartmentID column when a new row is added.

What should you do?

A. Set the expression property of the DepartmentID column to "DepartmentID + 1".

B. Add a Unique constraint for the DepartmentID column.

C. Set the AutoIncrement property of the DepartmentID column to True.

D. Designate the DepartmentID column as the primary key.

Answer: C

Question: 25

You are creating multiple threads in your application that will execute the same method.

You need to synchronize access to a block of code within the method so that no two threads execute the block at the same time.

What should you do?

A. Add a SynchronizationAttribute attribute to the method that the multiple threads will call.

B. Call the Monitor.Enter method before the block of code you want to synchronize, and then call the Monitor.Exit method after the block of code you want to synchronize.

C. Use the Thread.BeginCriticalRegion method before the block of code you want to synchronize and the Thread.EndCriticalRegion method after the block of code you want to synchronize.

D. Call the Interlocked.Increment method before the block of code you want to synchronize, and then call the Interlocked.Decrement method after the block of code you want to synchronize.

Answer: B

Question: 26

You are creating a Windows Forms application. You create a class named ApplicationUtilities and add a method named BackgroundProcess. You anticipate that the BackgroundProcess method may require several minutes or longer to execute.

You need to ensure that the application remains responsive while the BackgroundProcess method runs.

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

- A. Create an instance of a `System.Threading.ThreadStart` delegate named `AsyncDelegate`, and pass the `BackgroundProcess` method in as a parameter.
- B. Create a delegate named `AsyncDelegate` that matches the signature of the `BackgroundProcess` method.
- C. Implement the `IAsyncResult` interface for the `ApplicationUtilities` class.
- D. Override the `BeginInvoke` and `EndInvoke` methods for the `ApplicationUtilities` class.
- E. Call `AsyncDelegate.BeginInvoke` to execute the method. After the method is complete, call `AsyncDelegate.EndInvoke`.
- F. Call `ApplicationUtilities.BeginInvoke` to execute the method. After the method is complete, call `ApplicationUtilities.EndInvoke`.

Answer: B, E

Question: 27

You are creating a Windows Form that includes custom print functionality. You need to ensure that exactly four pages are printed. What should you do?

- A. In the `BeginPrint` event handler, reset a counter. Increment the counter each time that the `PrintPage` event handler is invoked. On the fourth invocation, set the `PrintPageEventArgs.HasMorePages` property to `False`.
- B. In the `BeginPrint` event handler, reset a counter. Increment the counter each time that the `PrintPage` event handler is invoked. On the fourth invocation, set the `PrintPageEventArgs.Cancel` property to `True`.
- C. In the `PrintPage` event handler, ensure that the page will render only if the `PrintPageEventArgs.HasMorePages` property is set to `True`.
- D. In the `PrintPage` event handler, ensure that the page will render only if the `PrintPageEventArgs.Cancel` property is set to `False`.

Answer: A

Question: 28

You are creating a Windows user control named `UrlRequest`. `UrlRequest` contains a `ComboBox` control named `cboUrl` and a `Button` control named `btnGo`. When the user clicks `btnGo`, you want the `UrlRequest` control to provide notification that the value of `cboUrl` changed. You need to implement the notification functionality. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Create a public event named `UrlRequested` and a property named `Url` for your control that returns the `Url` value of `cboUrl`.
- B. Change the `Modifiers` property of `btnGo` to `Public`.
- C. Add a `DefaultEvent` attribute to `UrlRequest` that uses the `btnGo_Click` event as an argument.
- D. Change the `Modifiers` property of `cboUrl` to `Public`.

E. Raise the URLRequest event in the Click event handler for btnGo.

Answer: A, E

Question: 29

You are creating a shaped Windows Form. The shape and background for the form are available in a bitmap file named Background.bmp. The FormBorderStyle property is set to None and the BackgroundImage property is set to background.bmp. However, when the application runs, the entire image including all of the background is visible and the form still appears to be rectangular. You need to configure the form so that it takes the shape of the bitmap file without the background. What should you do?

- A. Set the BackgroundImageLayout property to None.
- B. Set the BackColor property of the form to the background color of Background.bmp.
- C. Set the Opacity property of the form to 0%.
- D. Set the TransparencyKey property of the form to the background color of Background.bmp.

Answer: D.

Question: 30

You are creating a data-entry application that uses many TextBox controls. Each control requires special validation logic.

You need to ensure an extended version of the standard Windows Forms TextBox control that has the validation logic built into the control. You start by creating a new Windows Control Library project.

What should you do?

- A. Add a TextBox control to the control design surface, and add properties and methods as required.
- B. In the code, change the class to derive from the UserControl class, and add properties and methods as required.
- C. In the code, change the class to derive from the TextBox class, and add properties and methods as required.
- D. In the code, change the class to derive from the Control base class, and add properties and methods as required.

Answer: C

Question: 31

You create a Windows user control named EmployeeData. You want to provide design-time layout support for EmployeeData so that it will easily align with other controls on the form.

You create a class named SnapLineDesigner that inherits from the System.Windows.Forms.Design.ControlDesigner class. You add a Designer attribute to the EmployeeData class and pass in snapLineDesigner as the designer TypeName parameter. You need to provide the design-time layout support for EmployeeData.

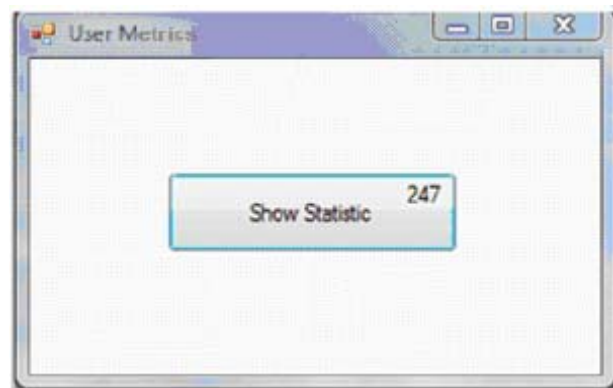
What should you do?

- A. In the constructor of EmployeeData, add items to the SnapLines collection of EmployeeData.
- B. In the constructor of EmployeeData, add items to the SnapLines collection of SnapLineDesigner.
- C. In the constructor of SnapLineDesigner, add items to the SnapLines collection of EmployeeData.
- D. In the constructor of SnapLineDesigner, add items to the SnapLines collection of SnapLineDesigner.

Answer: D

Question: 32

Exhibit:



You are building a custom extended button control. This control handles its own painting by displaying a particular metric value in the upper right corner of the button, as shown in the exhibit. You test this feature and verify that it works correctly. You also want the displayed value to be updated in real time as the user uses the application. You override the OnPaint method of the control to raise the Paint event when required. Your project compiles and builds with no problems, but the control does not paint itself correctly. You need to ensure that the control paints itself correctly. What should you do?

- A. Call the base OnPaint method of the class from within your OnPaint method.
- B. Raise the Paint event handler from within the OnPaint method.
- C. Call the OnPaint method of the base class from within the Paint event.
- D. Use the DefaultEvent attribute on your control class to specify that events will correctly ripple down the event chain from the base class to your current instance.

Answer: A

Question: 33

You are customizing a Windows Form.

You need to add an input control that provides AutoComplete suggestions to the user as the user types.

Which two controls can you use to achieve this goal? (Each correct answer presents a complete solution. Choose two.)

- A. TextBox control set to SingleLine mode
- B. TextBox control set the MultiLine mode
- C. ComboBox control
- D. RichTextBox control
- E. MaskedTextBox control

Answer: A, C

Question: 34

You are creating a Windows Forms application to retrieve and modify data. Depending on the installation, the data source can .. a Microsoft Access database or a Microsoft SQL Server 2000 or later database.

You need to ensure that your application accesses data by automatically using the data provider that is optimized for the data source.

What should you do?

- A. Use the ODBC data provider classes.
- B. Use the OLE DB data provider classes.
- C. Use the SQL Server data provider classes.
- D. Use the DbProviderFactory class and related classes.

Answer: D

Question: 35

You are creating a Windows Forms application. The application executes a stored procedure that takes several seconds to complete. The procedure is invoked to populate a SqlDataReader object.

You need to ensure that the application remains responsive to the user while the stored procedure is executing.

What should you do?

- A. Use the SqlCommand.BeginExecuteReader method to call the stored procedure. Retrieve results by using the EndExecuteReader method.
- B. Use the SqlCommand.ExecuteReader method. Set the behavior parameter of this method to CommandBehavior.SequentialAccess.
- C. Create and bind a SqlDependency object to SqlCommand object. Call the SqlCommand.ExecuteReader method. Associate an OnChanged event handler with the SqlDependency object. Gather results in the OnChanged event handler method.
- D. Set the Notification property of a SqlCommand object to a SqlNotificationRequest object. Call the SqlCommand.ExecuteReader method. Gather results on a background thread.

Answer: A

Question: 36

You are creating a Windows Forms application that targets Microsoft Windows 2000 or later.

You need to configure your Setup application for conditional installation.

Which part or parts of a Setup application can be configured for conditional installation based on the operating system? (Choose all that apply.)

- A. primary output of a project
- B. registry keys and values
- C. file type associations
- D. user interface dialog boxes
- E. custom actions

Answer: B, C

Question: 37

A Windows Forms application loads an XmlDocument from a file named books.xml. You need to validate the XML against a schema that is contained in the books.xsd file when the XML loads. What should you do?

- A. Associate the schema file with an XmlReader. Load the XmlDocument by using the XmlReader.
- B. Add the schema to the Schemas property of the XmlDocument. Call the Load method of the XmlDocument by setting the filename parameter to books.xsd.
- C. Call the Load method of the XmlDocument by setting the filename parameter to books.xsd, and then call the Load method by setting the filename parameter to books.xml.
- D. Call the Load method of the XmlDocument by setting the filename parameter to books.xsd. Programmatically add the attribute xsi:schemaLocation to the root node. Set the value of this attribute to books.xsd.

Answer: A

Question: 38

You are creating a Windows Forms setup application. The default user interface does not meet your needs. You want to provide an additional dialog box that includes two check boxes during the install process. You want the check boxes to give users the option to install two large Help files named Company1 and Company2 during the installation process. You need to customize the interface to meet your needs. Which three actions should you perform? (Each correct answer presents part of the solution. Choose three.)

- A. Create the dialog box and the logic for the dialog box in a separate project. Compile the project into an executable, and add the executable to the setup project.
- B. In the User Interface Editor, add a Checkboxes dialog box to the Start node of the user interface tree.
- C. In the Custom Actions Editor to add the dialog box executable for the setup application to the install node.
- D. In the Properties window for your setup project, set the PreBuildEvent property to call a command line to display the dialog box.

E. In the File System Editor, set the Condition property for Company1 to the value of the Checkbox1Property property.
Set the condition property for Company2 to the value of the Checkbox2Property property.
F. Set the Checkbox3Visible and Checkbox4Visible properties of the Checkboxes dialog box to False.

Answer: B, E, F

Question: 39

You are testing an installation package for a Windows Forms application. You notice that the installed application will not run on client computers that do not have the .Net Framework installed.

You need to ensure that when a user installs the application on his or her client computer, the .Net Framework is also installed.

What should you do?

- A. Select the .Net Framework in the Dependencies property value in the project's property grid.
- B. Verify that the .Net Framework redistributable package check box is selected under the Prerequisites button on the setup property pages.
- C. Add the .Net Framework redistributable package to the setup project in the File System Editor.
- D. Create a Custom Actions Editor that copies the .Net Framework redistributable package to the application's root directory.

Answer: B

Question: 40

You create a Windows-based application that requires the use of a COM component.

You need to create a ClickOnce deployment package to distribute the application from an Internet Web site.

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

- A. Set the Isolated property of the COM component references in the application project to False.
- B. Set the Isolated property of the COM component references in the application project to True.
- C. Verify that the user is using Microsoft Windows XP.
- D. Verify that the user is using Microsoft Windows 2000.
- E. Assign RegistryPermission to the application.

Answer: B, C

Question: 41

You are creating a setup project. You want to add functionality that will execute only if the setup project is executed by an administrative user.

You need to configure features of your installation package to execute only when the installation is run by an administrative user.

Which setup project editor supports this functionality by default?

- A. File System Editor
- B. Registry Editor
- C. User Interface Editor
- D. Custom Action Editor

Answer: C

Question: 42

You are creating a multiple-document interface (MDI) Windows Forms application that contains an MDI parent form and an MDI child form. You add a MenuStrip control to the parent form and a MenuStrip control to the child form. You add a top-level menu item labeled File to each menu. You then add different submenu items to each menu.

When a child window is visible, the application should display a single top-level File menu that contains the combined set of submenu items.

You need to set form properties so that the menus combine correctly.

What should you do?

- A. Set the MergeAction property of the child form's File menu item to MatchOnly.
Set the MergeAction property of the child form's submenu items to Insert.
- B. Set the MergeAction property of the parent form's File menu item to MatchOnly.
Set the MergeAction property of the parent form's submenu items to Insert.
- C. Set the MergeAction property of the child form's File menu item to Insert.
Set the MergeAction property of the child form's submenu items to MatchOnly.
- D. Set the MergeAction property of the parent form's File menu item to Insert.
Set the MergeAction property of the parent form's submenu items to MatchOnly.

Answer: A

Question: 43

You are creating a complex data-entry Windows Forms application. The application allows users to move text between text boxes by using drag-and-drop operations. Your company also has other data-entry applications.

You need to ensure that users can perform similar drag-and-drop operations between the different applications.

What should you do?

- A. Ensure that the AllowedEffect property in each application includes the DragDropEffects.Link settings.
- B. Ensure that the Effect property in each application includes the DragDropEffects.Link setting.
- C. Ensure that the Effect property in the drag source application includes the DragDropEffects.Link setting, and the AllowEffect property in drop target application is set to DragDropEffects.Copy.
- D. Ensure that the Effect and AllowEffect properties in each application includes the DragDropEffects.Copy setting.

Answer: D

Question: 44

You are working with a Windows Forms application that uses the Application.Settings features... You need to perform certain processing actions when user settings are changed at run time. Which two events should you handle to achieve this goal? (Each correct answer presents part of the solution. Choose two.)

- A. SettingChanging
- B. PropertyChanged
- C. StateChange
- D. SettingsLoaded
- E. Change

Answer: A, B

Question: 45

You are creating the printing components of an application for your company. A security requirement states that users can choose only local printers attached to their computers. Browsing network printers is prohibited. You need to disable a user's ability to browse the network for printers when using the PageSetup dialog box. What should you do?

- A. Use the ShowNetwork property of the PageSetupDialog component to remove the Network button from the Page Setup dialog box.
- B. Use the PrinterSettings.PrinterName property to explicitly refer to the approved printers.
- C. Use the PrinterSettings.PaperSource property to explicitly refer to the approved paper sources.
- D. Set the AllowPrinter property of the PageSetupDialog component to False.
- E. Use the PageSettings.PaperSource property of the PageSetupDialog component to explicitly refer to the approved paper sources.

Answer: A

Question: 46

You are creating a Windows Form application. You add a new form named ClientNameDialog that will be used as a custom dialog box. The form contains custom control name btnOk, another button control named btnCancel, and a text box control named txtName. You need to notify the application's startup form which button was clicked when the dialog box is closed. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Use the ShowDialog method to display an instance of ClientNameDialog.

- B. Use the Show method and pass the current form as a parameter to display an instance of ClientNameDialog.
- C. Using the DialogResult property of the dialog box instance, indicate which button the user clicks on ClientNameDialog.
- D. Using the AcceptButton property of the dialog box instance, indicate which button the user clicks on ClientNameDialog.

Answer: A, C

Question: 47

You are creating an application named CompanyApp1. You use ClickOnce deployment to distribute CompanyApp1.exe and multiple Assemblies. Some users require only some of the functionality in CompanyApp1.

You need to limit the size of the initial download of the application. You also need to ensure that users can download the assemblies on demand.

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

- A. Mark each dependency in CompanyApp1.exe.manifes as optional.
- B. Mark each dependency in CompanyApp1.application as optional.
- C. Create an event handler for the AppDomain.ResourceResolve event named ResolveAssembly.
- D. Create an event handler for the AppDomain.AssemblyLoad event named ResolveAssembly.
- E. In the ResolveAssembly event handler, set the ApplicationDeployment.CurrentDeployment.ActivationUri property to the location of your required assembly.
- F. In the ResolveAssembly event handler, call ApplicationDeployment.DownloadFiles and pass in the name of the assembly you want.

Answer: A, C, F

Question: 48

You are creating a Windows Forms application that implements a master/detail form by using two DataGridView controls. You populate a dataset with a master table and a details table. You set the DataSource property of the master DataGridView control to the dataset. You set the DataMember property to the name of the master table. You also set the DataSource property of the details DataGridView control to the dataset.

You need to ensure that the details DataGridView control displays only the child rows of the selected master row.

What should you do?

- A. Add a foreign key constraint to the dataset.
Set the DataMember property of the child DataGridView control to the name of the foreign key constraint.
- B. Define a data relation between the master table and details table in the dataset.
Set the DataMember property of the child DataGridView to the name of the data relation.

C. Add a foreign key constraint to the dataset.
Set the DataMember property of the child DataGridView control to the name of the details table.

D. Define a data relation between the master table and details table in the dataset.
Bind the details DataGridView control to the dataset.
Set the DataMember property of the child DataGridView control to the name of the details table.

Answer: B

Question: 49

You are creating a Windows Form that includes printing functionality to print an image of the form. A helper function with the following signature creates a bitmap of the current form.
Function CreateFormImageBitmap(ByVal graphic As Graphics) As _
Bitmap
You need to implement the PrintPage event handler to call the helper function and draw the image onto the print document. Which code segment should you use?

A. Dim g As Graphics = e.Graphics
Dim formImageBitmap As Bitmap = CreateFormImageBitmap(g)
g.DrawImage(formImageBitmap, e.MarginBounds)

B. Dim g As Graphics = Me.CreateGraphics()
Dim formImageBitmap As Bitmap = CreateFormImageBitmap(g)
g.DrawImage(formImageBitmap, g.ClipBounds)
g.Dispose()

C. Dim g As Graphics = Me.CreateGraphics()
Dim formImageBitmap As Bitmap = CreateFormImageBitmap(e.Graphics)
g.DrawImage(formImageBitmap, g.ClipBounds)
g.Dispose()

D. Dim g As Graphics = Me.CreateGraphics()
Dim formImageBitmap As Bitmap = CreateFormImageBitmap(g)
e.Graphics.DrawImage(formImageBitmap, e.MarginBounds)
g.Dispose()

Answer: D

Question: 50

Your law firm uses a custom application to create and print legal documents. Currently, users can print any portion of a document that they want from the application by using the options in the Print dialog box. This Print dialog box was implemented by using the PrintDialog component. New security and auditing rules state that the application must implement a business rule that requires users to print documents in their entirety. Printing only portions of a document is prohibited. You need to modify the PrintDialog component named printDlg to enforce the business rule when a user prints. You must implement this rule with the minimum amount of impact to users. What should you do?

- A. Set the PrintDialog component to printDlg.PrinterSettings.PrintRange = PrintRange.AllPages.
- B. Call the printDlg.Reset method when the Print dialog box is closed.
- C. Configure the following settings for the PrintDialog component.
printDlg.AllowSomePages = False
printDlg.AllowSelection = False
printDlg.AllowCurrentPage = False
- D. Create a warning message that displays if the user selects the Pages option in the Print dialog box to try to print a subset of a document. Use the following settings to set the full document to print.
printDlg.PrinterSettings.FromPage = 1
printDlg.PrinterSettings.MinimumPage = 1
printDlg.PrinterSettings.ToPage = 1
printDlg.PrinterSettings.MaximumPage = 1

Answer: C

Question: 51

You are customizing a Windows Form to update a database asynchronously by using an instance of a BackgroundWorker component named bgwExecute. You start the component by using the following code.

```
Private Sub StartBackgroundProcess()
    AddHandler bgwExecute.DoWork, _
    New DoWorkEventHandler(AddressOf WorkHandler)
    AddHandler bgwExecute.RunWorkerCompleted, _
    New RunWorkerCompletedEventHandler(AddressOf _
    CompletedHandler)
    AddHandler bgwExecute.ProgressChanged, _
    New ProgressChangedEventHandler(AddressOf ProgressChanged)
    bgwExecute.RunWorkerAsync()
End Sub
```

If the UpdateDB method that is called by the BackgroundWorker component returns the value False, you need to display a message box to the user that indicates that the update failed. Which code segment should you use?

- A. Sub WorkHandler(ByVal sender As Object, ByVal e As DoWorkEventArgs)
 If Not UpdateDB() Then
 MessageBox.Show("Update failed")
 End If
 End Sub
- B. Sub CompletedHandler(ByVal sender As Object, ByVal e As _
 RunWorkerCompletedEventArgs)
 If Not UpdateDB() Then
 MessageBox.Show("Update failed")
 End If
 End Sub
- C. Sub WorkHandler(ByVal sender As Object, ByVal e As DoWorkEventArgs)
 e.Result = UpdateDB()
 End Sub
 Sub CompletedHandler(ByVal sender As Object, ByVal e As _

```

RunWorkerCompletedEventArgs)
If Not CBool(e.Result) Then
    MessageBox.Show("Update failed")
End If
End Sub
D. Sub WorkHandler(ByVal sender As Object, ByVal e As DoWorkEventArgs)
    e.Result = UpdateDB()
End Sub
Sub CompletedHandler(ByVal sender As Object, ByVal e As _
    RunWorkerCompletedEventArgs)
    If Not CBool(e.Result) Then
        bgwExecute.ReportProgress(0)
    End If
End Sub
Sub ProgressChanged(ByVal sender As Object, ByVal e As _
    ProgressChangedEventArgs)
    If e.ProgressPercentage = 0 Then
        MessageBox.Show("Update failed")
    End If
End Sub

```

Answer: C

Question: 52

You are creating a Windows Forms application. You implement the asynchronous design pattern by using a delegate named `DataUpdateHandler`. `DataUpdateHandler` executes a method named `DataUpdater`. You create an instance of the `DataUpdateHandler` that has the variable name `Updater`. `DataUpdater` uses a `DataSet` class as a parameter and returns an integer value that indicates the number of rows that have been updated. You need to use a method named `DisplayResults` to display the results when the database update is complete. Which code segment should you use?

```

A. Dim result As IAsyncResult = Updater.BeginInvoke(mData, Nothing, _
    Nothing)
' ...
Dim value As Integer = result.AsyncState
DisplayResults(value)
B. Dim result As IAsyncResult = Updater.BeginInvoke(mData, Nothing, _
    Nothing)
' ...
Dim value As Integer = Updater.EndInvoke(result)
DisplayResults(value)
C. Dim result As IAsyncResult = Updater.BeginInvoke(mData, Nothing, _
    "DisplayResults")
' ...
Updater.EndInvoke(result)

```

```
D. Dim result As IAsyncResult = Updater.BeginInvoke(mData, Nothing, _  
"DataUpdater")  
' ...  
Updater.EndInvoke(result)
```

Answer: B

Question: 53

You want to execute an event handler asynchronously from a Windows Form. You need to write code that uses the BackgroundWorker component named bgwExecute to execute the WorkHandler method. Which code segment should you use?

- A. Dim work As New EventHandler(AddressOf WorkHandler)bgwExecute.RunWorkerAsync(work)
- B. Dim tsBackground As New ThreadStart(AddressOf WorkHandler)bgwExecute.ReportProgress(0, tsBackground)
- C. Dim tsBackground As New ThreadStart(AddressOf WorkHandler)bgwExecute.RunWorkerAsync(tsBackground)
- D. AddHandler bgwExecute.DoWork, AddressOf WorkHandlerbgwExecute.RunWorkerAsync()

Answer: D

Question: 54

You are customizing a Windows Form to asynchronously update a database. You need to ensure that the form displays a message box to the user that indicates the success or failure of the update. Which three code segments should you use? (Each correct answer presents part of the solution. Choose three.)

- A. Private Sub StartBackgroundProcess()
AddHandler bgwExecute.DoWork, AddressOf WorkHandler
AddHandler bgwExecute.RunWorkerCompleted, AddressOf CompletedHandler
bgwExecute.RunWorkerAsync()
End Sub
- B. Private Sub StartBackgroundProcess()
AddHandler bgwExecute.ProgressChanged, AddressOf CompletedHandler
Dim tsBackground As New ThreadStart(AddressOf WorkHandler)
bgwExecute.RunWorkerAsync(tsBackground)
End Sub
- C. Private Sub StartBackgroundProcess()
AddHandler bgwExecute.RunWorkerCompleted, AddressOf CompletedHandler
Dim tsBackground As New ThreadStart(AddressOf WorkHandler)
bgwExecute.RunWorkerAsync(tsBackground)
End Sub
- D. Sub WorkHandler(ByVal sender As Object, ByVal e As DoWorkEventArgs)
...

```

e.Result = True
End Sub
E. Sub WorkHandler(ByVal sender As Object, ByVal e As DoWorkEventArgs)
...
bgwExecute.ReportProgress(100, True)
End Sub
F. Sub CompletedHandler(ByVal sender As Object, ByVal e As _
RunWorkerCompletedEventArgs)
Dim result As Boolean = CBool(e.Result)
If result Then
MessageBox.Show("Update was successful")
Else
MessageBox.Show("Update failed")
End If
End Sub
G. Sub ProgressHandler(ByVal sender As Object, ByVal e As _
ProgressChangedEventArgs)
Dim result As Boolean = CBool(e.UserState)
If result Then
MessageBox.Show("Update was successful")
Else
MessageBox.Show("Update failed")
End If
End Sub

```

Answer: A, D, F

Question: 55

You are creating a Windows Forms application. You create a `System.Threading.Semaphore` instance in the application by using the following code.

```
Dim ThreadPool As Semaphore = New Semaphore(0, 3)
```

...

```
ThreadPool.Release(4)
```

What does this code do?

- A. Sets the internal counter for the semaphore to 4.
- B. Sets the internal counter for the semaphore to 0.
- C. Throws a `SemaphoreFullException`.
- D. Throws a `ThreadAbortException`.

Answer: C

Question: 56

You are creating a Windows Forms application. The application uses a `SqlCommand` object named `cmd`. The `cmd` object executes the following stored procedure.

```
CREATE PROCEDURE GetPhoneList
```

```
AS
BEGIN
SELECT CompanyName, Phone FROM Customers
SELECT CompanyName, Phone FROM Suppliers
END
```

You need to add all returned rows to the ListBox control named lstPhones. Which code segment should you use?

A. Dim rdr As SqlDataReader = cmd.ExecuteReader()

```
Do
While rdr.Read()
lstPhones.Items.Add((rdr.GetString(0) + ControlChars.Tab +
rdr.GetString(1)))
End While
```

Loop While rdr.NextResult()

B. Dim rdr As SqlDataReader = cmd.ExecuteReader()

```
While rdr.Read()
lstPhones.Items.Add((rdr.GetString(0) + ControlChars.Tab +
rdr.GetString(1)))
End While
```

C. Dim rdr As SqlDataReader = cmd.ExecuteReader()

```
While rdr.NextResult() While rdr.Read()
lstPhones.Items.Add((rdr.GetString(0) + ControlChars.Tab +
rdr.GetString(1)))
End While
End While
```

D. Dim rdr As SqlDataReader = cmd.ExecuteReader()

```
While rdr.NextResult()
lstPhones.Items.Add((rdr.GetString(0) + ControlChars.Tab +
rdr.GetString(1)))
End While
```

Answer: A

Question: 57

A Windows Forms application contains the following code segment.

```
Dim SQL As String = "SELECT EmployeeID, LastName, FirstName FROM Employees"
Dim da As New SqlDataAdapter(SQL, connStr)
Dim dt As New DataTable()
da.MissingSchemaAction = MissingSchemaAction.AddWithKey
Dim bld As New SqlCommandBuilder(da)
da.Fill(dt)
```

The application allows the user to add rows to the data table. The application will propagate these additions to the database. If the addition of any row fails, the other rows must still be added. The code must log how many new rows failed to be added. You need to propagate the additions to the database and log a failed count. Which code segment should you use?

A. da.ContinueUpdateOnError = True

```

da.Update(dt)
Dim dtErrors As DataTable = dt.GetChanges(DataRowState.Unchanged)
Trace.WriteLine((dtErrors.Rows.Count.ToString() + " rows not added. "))
B. da.ContinueUpdateOnError = False
da.Update(dt)
Dim dtErrors As DataTable = dt.GetChanges(DataRowState.Unchanged)
Trace.WriteLine((dtErrors.Rows.Count.ToString() + " rows not added. "))
C. da.ContinueUpdateOnError = True
da.Update(dt)
Dim rows As DataRow() = dt.GetErrors()
Trace.WriteLine((rows.Length.ToString() + " rows not added. "))
D. da.ContinueUpdateOnError = False
da.Update(dt)
Dim rows As DataRow() = dt.GetErrors()
Trace.WriteLine((rows.Length.ToString() + " rows not added. "))

```

Answer: C

Question: 58

A Windows Forms application reads the following XML file.

```

<?xml version="1.0"?>
<x:catalog xmlns:x="urn:books">
<book id="bk101">
<author>Gambardella, Matthew</author>
<title>XML Developer's Guide</title>
</book>
<book id="bk102">
<author>Ralls, Kim</author>
<title>Midnight Rain</title>
</book>
</x:catalog>

```

The form initialization loads this file into an XmlDocument object named docBooks. You need to populate a ListBox control named lstBooks with the concatenated book ID and title of each book. Which code segment should you use?

```

A. Dim elements As XmlNodeList = docBooks.GetElementsByTagName("book")
Dim node As XmlElement
For Each node In elements
Dim s As String = node.GetAttribute("id") + " - "
s = s + node.SelectSingleNode("title").InnerText
lstBooks.Items.Add(s)
Next node
B. Dim elements As XmlNodeList = docBooks.GetElementsByTagName("book")
Dim node As XmlElement
For Each node In elements
Dim s As String = node.SelectSingleNode("id").ToString() + " - "

```

```

s = s + node.GetAttribute("title")
lstBooks.Items.Add(s)
Next node
C. Dim elements As XmlNodeList = docBooks.GetElementsByTagName("book")
Dim node As XmlElement
For Each node In elements
Dim s As String = node.GetAttribute("id") + " - "
s = s + node.SelectSingleNode("title").Value
lstBooks.Items.Add(s)
Next node
D. Dim elements As XmlNodeList = docBooks.GetElementsByTagName("book")
Dim node As XmlElement
For Each node In elements
lstBooks.Items.Add(node.InnerXml)
Next node

```

Answer: A

Question: 59

You create an application that provides accessibility features. Your standard forms display a background image. When the user selects Use High Contrast in the Accessibility Options in Control Panel, you want this image to be removed. You need to add an event to handle this accessibility setting change. Which event should you use?

- A. Me.StyleChanged
- B. SystemEvents.UserPreferenceChanged
- C. Me.ChangeUICues
- D. SystemEvents.DisplaySettingsChanged

Answer: B

Question: 60

You are localizing a Windows Forms application. You put all error message strings into a resource file named ErrorMessages.resx. When the resource file is compiled, a strongly typed resource class is generated. You need to retrieve an error message named CatastrophicErr from the exception-handling code. Which code segment should you use?

- A. Dim s As String = My.Resources.ErrorMessages.CatastrophicErr
- B. Dim s As String = _Settings.Default("ErrorMessages_CatastrophicErr").ToString()
- C. Dim si As New StringInfo("ErrorMessages.CatastrophicErr")Dim s As String = si.String
- D. Dim a As [Assembly] = [Assembly].GetExecutingAssembly()Dim stream As Stream = _a.GetManifestResourceStream("ErrorMessages.CatastrophicErr")Dim sr As New StreamReader(stream)Dim s As String = sr.ReadToEnd()

Answer: A

Question: 61

You are creating a Windows Form. You add a TableLayoutPanel control named pnlLayout to the form. You set the properties of pnlLayout so that it will resize with the form. You need to create a three-column layout that has fixed left and right columns. The fixed columns must each remain 50 pixels wide when the form is resized. The middle column must fill the remainder of the form width when the form is resized. You add the three columns in the designer. Which code segment should you use to format the columns at run time?

- A. `pnlLayout.ColumnStyles.Clear()`
`pnlLayout.ColumnStyles.Add(New ColumnStyle(SizeType.Absolute, 50.0F))`
`pnlLayout.ColumnStyles.Add(New ColumnStyle(SizeType.AutoSize, 100.0F))`
`pnlLayout.ColumnStyles.Add(New ColumnStyle(SizeType.Absolute, 50.0F))`
- B. `pnlLayout.ColumnStyles(0).Width = 50.0F`
`pnlLayout.ColumnStyles(0).SizeType = SizeType.Absolute`
`pnlLayout.ColumnStyles(2).Width = 50.0F`
`pnlLayout.ColumnStyles(2).SizeType = SizeType.Absolute`
- C. `pnlLayout.ColumnStyles(0).Width = 50.0F`
`pnlLayout.ColumnStyles(0).SizeType = SizeType.Absolute`
`pnlLayout.ColumnStyles(1).Width = 100.0F`
`pnlLayout.ColumnStyles(1).SizeType = SizeType.AutoSize`
`pnlLayout.ColumnStyles(2).Width = 50.0F`
`pnlLayout.ColumnStyles(2).SizeType = SizeType.Absolute`
- D. `pnlLayout.ColumnStyles.Clear()`
`pnlLayout.ColumnStyles.Add(New ColumnStyle(SizeType.Absolute, 50.0F))`
`pnlLayout.ColumnStyles.Add(New ColumnStyle(SizeType.Percent, 100.0F))`
`pnlLayout.ColumnStyles.Add(New ColumnStyle(SizeType.Absolute, 50.0F))`

Answer: D

Question: 62

You are customizing a Windows Form. The form includes a menu that has several ToolStripMenuItem controls. An event handler is configured to handle the Click event for all ToolStripMenuItem controls. The event handler has the following signature.

```
Private Sub mnu_Click(ByVal sender As System.Object,  
ByVal e As System.EventArgs)
```

The form class includes a method that has the following signature.

```
Private Sub LogClick(ByVal ctlName As String)
```

You need to add code so that when a user clicks a ToolStripMenuItem control, the mnu_Click method calls the LogClick method. The LogClick method must be called with the ctlName parameter set to the menu text in the ToolStripMenuItem control. Which code segment should you use?

- A. `Dim mnulItem As ToolStripMenuItem = CType(sender, ToolStripMenuItem)`
`LogClick(mnulItem.Text)`
- B. `LogClick(e.ToString())`

C. LogClick(Me.Text)
D. Dim mnuItem As ToolStripMenuItem = CType(Me.GetContainerControl(),
ToolStripMenuItem)LogClick(mnuItem.Text)

Answer: A

Question: 63

You are creating a Windows Form that includes a TextBox control named txtDate. When a user right-clicks within the text box, you want the application to display a MonthCalendar control. You need to implement a context menu that provides this functionality. What should you do?

- A. Add the following code to the form initialization.
Dim cal As New MonthCalendar()
Dim mnuContext As New ContextMenuStrip()
Dim host As New ToolStripControlHost(mnuContext)
txtDate.ContextMenuStrip = mnuContext
- B. Add the following code to the form initialization.
Dim mnuContext As New ContextMenuStrip()
Dim cal As New MonthCalendar()
Dim host As New ToolStripControlHost(cal)
mnuContext.Items.Add(host)
txtDate.ContextMenuStrip = mnuContext
- C. Add the following code to the form initialization.
Dim ctr As New ToolStripContainer()
Dim cal As New MonthCalendar()
ctr.ContentPanel.Controls.Add(cal)
txtDate.Controls.Add(ctr)
Add a MouseClick event handler for the TextBox control that contains the following code.
If e.Button = MouseButtons.Right Then txtDate.Controls(0).Show()
End If
- D. Add a MouseClick event handler for the TextBox control that contains the following code.
If e.Button = MouseButtons.Right Then
Dim mnuContext As New ContextMenuStrip()
Dim cal As New MonthCalendar()
Dim host As New ToolStripControlHost(cal)
mnuContext.Items.Add(host)
txtDate.ContextMenuStrip = mnuContext
End If

Answer: B

Question: 64

You are customizing a Windows Form. When the user clicks any button, you want the application to log information about the users actions by calling a method with the following signature.

```
Public Sub ctl_Click(ByVal sender As Object,  
ByVal e As EventArgs)
```

You want the form to invoke this method when any Button control is clicked and only when a Button control is clicked. You need to modify the form to invoke this method without interfering with the existing operations of the application. What should you do?

- A. Add the following code to the form initialization.
Dim ctl As Control
For Each ctl In Me.Controls
If TypeOf ctl Is Button Then
AddHandler ctl.Click, AddressOf ctl_Click

End If
Next ctl
B. Add the following code to the form initialization.
AddHandler Me.Click, AddressOf ctl_Click
C. Use the Properties dialog box to set the Click event for each Button control on the form to the
ctl_Click method.
D. Use the Properties dialog box to set the Click event of the form to the ctl_Click method.

Answer: A

Question: 65

You are creating a custom control that displays an image in the background. You notice that when the control is resized, the background image flickers while the control is repeatedly repainted. You need to eliminate the background image flicker. Which three code segments should you use? (Each correct answer presents part of the solution. Choose three.)

- A. Me.SetStyle(ControlStyles.OptimizedDoubleBuffer, True)
- B. Me.SetStyle(ControlStyles.AllPaintingInWmPaint, True)
- C. Me.SetStyle(ControlStyles.UserPaint, True)
- D. Me.SetStyle(ControlStyles.ResizeRedraw, True)
- E. Me.SetStyle(ControlStyles.Opaque, True)

Answer: A, C, D

Question: 66

You are creating a custom Windows Forms control. On the background of the control, an ellipse completely filled with a colored gradient is drawn. The bounds for the ellipse are equal to the bounds for the control. The control must correctly repaint itself in all situations. You need to include the drawing of the ellipse in the OnPaint event handler for the custom control. Which code segment should you use?

- A. Dim linearGradientBrush = New LinearGradientBrush(_
Me.ClientRectangle, startGradient, endGradient, 45)
e.Graphics.FillEllipse(linearGradientBrush, e.ClipRectangle)
- B. Dim linearGradientBrush = New LinearGradientBrush(_
New Point(Me.Left, Me.Top), New Point(Me.Right, Me.Bottom), _
startGradient, endGradient)
e.Graphics.FillEllipse(linearGradientBrush, e.ClipRectangle)
- C. Dim linearGradientBrush = New LinearGradientBrush(_
New Rectangle(Me.Left, Me.Top, Me.Width, Me.Height), _
startGradient, endGradient, 45, True)
e.Graphics.FillEllipse(linearGradientBrush, _
Me.Left, Me.Top, Me.Width, Me.Height)
- D. Dim linearGradientBrush = New LinearGradientBrush(Me.ClientRectangle,
startGradient, endGradient, 45)
e.Graphics.FillEllipse(linearGradientBrush, Me.ClientRectangle)

Answer: D

Question: 67

You are creating a Windows Forms application that prints reports. The application uses the PrintDocument control to print the report and the PrintPreviewDialog control to preview reports as shown in the following code segment.

```
streamToPrint = New StreamReader("FileToPrint.txt")
Try
Dim pd As New PrintDocument()
AddHandler pd.PrintPage, AddressOf pd_PrintPage
Dim ppd As New PrintPreviewDialog()
ppd.Document = pd
ppd.ShowDialog()
Finally
streamToPrint.Close()
End Try
```

When a report is printed by using the Print method on the PrintDocument class, the output is correct. When the report is previewed by using the Print Preview dialog box, the output is correct. However, when the report is printed by using the Print button in the Print Preview dialog box, a single blank page is produced. You need to ensure that the output is correct when the Print button in the Print Preview dialog box is used. What should you do?

- A. In the event handler for the ppd.Click event, set the position of the streamToPrint.BaseStream property to 0.
- B. In the event handler for the ppd.PrintPreviewControl.Click event, set the position of the streamToPrint.BaseStream property to 0.
- C. In the event handler for the pd.PrintPage event, set the position of the streamToPrint.BaseStream property to 0.
- D. In the event handler for the pd.BeginPrint event, set the position of the streamToPrint.BaseStream property to 0.

Answer: D

Question: 68

You are creating a Windows Forms application. Initialization code loads a DataSet object named ds that includes a table named Users. The Users table includes a column named IsManager. You need to bind the IsManager column to the Checked property of a check box named chkIsManager. Which code segment should you use?

- A. `chkIsManager.DataBindings.Add("Checked", ds, "Users.IsManager")`
- B. `chkIsManager.DataBindings.Add("Checked", ds, "IsManager")`
- C. `chkIsManager.Text = "{Users.IsManager}"`
`chkIsManager.AutoCheck = True`
- D. `Me.DataBindings.Add("chkIsManager.Checked", ds, "Users.IsManager")`

Answer: A

Question: 69

A Windows Forms application contains the following code segment.

```
Dim SQL As String = "SELECT OrderID, ProductID, UnitPrice, Quantity FROM [Order  
Details]"
```

```
Dim da As New SqlDataAdapter(SQL, connStr)
```

```
Dim dt As New DataTable()
```

```
da.Fill(dt)
```

You need to add a new column to the data table named ItemSubtotal. The ItemSubtotal column must contain the value of the UnitPrice column multiplied by the value of the Quantity column. Which code segment should you use?

A. Dim col As New DataColumn("ItemSubtotal")

```
col.DataType = GetType(Decimal)col.Expression = "UnitPrice *  
Quantity"dt.Columns.Add(col)
```

B. dt.Compute("UnitPrice * Quantity", "ItemSubtotal")

C. Dim col As New DataColumn("ItemSubtotal")

```
col.DataType = GetType(Decimal)
```

```
dt.Columns.Add(col)
```

```
dt.Compute("UnitPrice * Quantity", "ItemSubtotal")
```

D. Dim col As New DataColumn("ItemSubtotal")

```
col.DataType = GetType(Decimal)
```

```
col.DefaultValue = "UnitPrice * Quantity"dt.Columns.Add(col)
```

Answer: A

Question: 70

You are creating a Windows Forms application. The application loads a data table named dt from a database and modifies each value in the data table.

You add the following code. (Line numbers are included for reference only.)

```
01 Dim row As DataRow
```

```
02 For Each row In dt.Rows
```

```
03 Dim col As DataColumn
```

```
04 For Each col In dt.Columns
```

```
05
```

```
06 Trace.WriteLine(str)
```

```
07 Next col
```

```
08 Next row
```

You need to format the string named str to show the value of the column at the time the data is loaded and the current value in the column. Which code segment should you add at line 05?

A. Dim str As String = String.Format("Column was {0} is now {1}", row(col), row(col), DataRowVersion.Current))

B. Dim str As String = String.Format("Column was {0} is now {1}", row(col), DataRowVersion.Default, row(col))

C. Dim str As String = String.Format("Column was {0} is now {1}", row(col), row(col), DataRowVersion.Proposed))

D. Dim str As String = String.Format("Column was {0} is now {1}", row(col, DataRowVersion.Original), row(col))

Answer: D

Question: 71

You are creating a Windows Forms application that includes the database helper methods UpdateOrder and UpdateAccount. Each method wraps code that connects to a Microsoft SQL Server 2005 database, executes a Transact-SQL statement, and then disconnects from the database. You must ensure that changes to the database that result from the UpdateAccount method are committed only if the UpdateOrder method succeeds. You need to execute the UpdateAccount method and the UpdateOrder method. Which code segment should you use?

- A. Using ts As New TransactionScope()
UpdateOrder()
UpdateAccount()
ts.Complete()End Using
- B. Using ts1 As New TransactionScope()
UpdateOrder()
Using ts2 As New
TransactionScope(TransactionScopeOption.RequiresNew)
UpdateAccount()
ts2.Complete()
End Using
ts1.Complete()
End Using ts1.Complete();
- C. Using ts1 As New TransactionScope()
UpdateOrder()
Using ts2 As New
TransactionScope(TransactionScopeOption.RequiresNew)
UpdateAccount()
ts2.Complete()
End Using
ts1.Complete()End Using
- D. Using ts As New TransactionScope(TransactionScopeOption.RequiresNew)
UpdateOrder()
End Using
Using ts As New
TransactionScope(TransactionScopeOption.Required)
UpdateAccount()
ts.Complete()
End Using

Answer: A

Question: 72

You are customizing a Windows Form to use a BackgroundWorker component named bgwExecute. bgwExecute performs a database operation in an event handler named WorkHandler. You need to ensure that users can see the progress of the database operation by viewing a progress bar named pbProgress. You want the progress bar to appear when the database operation is 50 percent complete. Which code segment should you use?

A. Public Sub StartBackground()
bgwExecute.WorkerReportsProgress = True
AddHandler bgwExecute.ProgressChanged, AddressOf ProgressHandler
bgwExecute.RunWorkerAsync()
End Sub
Sub WorkHandler(ByVal sender As Object, ByVal e As DoWorkEventArgs)
bgwExecute.ReportProgress(50)
End Sub
Sub ProgressHandler(ByVal sender As Object, ByVal e As _
ProgressChangedEventArgs)
pbProgress.Value = e.ProgressPercentage
End Sub

B. Public Sub StartBackground()
bgwExecute.WorkerReportsProgress = True
AddHandler bgwExecute.ProgressChanged, AddressOf ProgressHandler
Dim t As New ThreadStart(AddressOf WorkHandler)
bgwExecute.RunWorkerAsync(t)
End Sub
Sub WorkHandler()
bgwExecute.ReportProgress(50)
End Sub
Sub ProgressHandler(ByVal sender As Object, ByVal e As _
ProgressChangedEventArgs)
pbProgress.Value = e.ProgressPercentage
End Sub

C. Public Sub StartBackground()
bgwExecute.WorkerReportsProgress = True
AddHandler bgwExecute.ProgressChanged, AddressOf ProgressHandler
Dim t As New Thread(New ThreadStart(AddressOf WorkHandler))
bgwExecute.RunWorkerAsync(t)
End Sub
Sub WorkHandler()
bgwExecute.ReportProgress(50)
End Sub
Sub ProgressHandler(ByVal sender As Object, ByVal e As _
ProgressChangedEventArgs)
pbProgress.Value = e.ProgressPercentage
End Sub

D. Public Sub StartBackground()
bgwExecute.WorkerReportsProgress = True

```

AddHandler bgwExecute.DoWork, AddressOf WorkHandler
AddHandler bgwExecute.ProgressChanged, AddressOf ProgressHandler
bgwExecute.RunWorkerAsync()
End Sub
Sub WorkHandler(ByVal sender As Object, ByVal e As DoWorkEventArgs)
bgwExecute.ReportProgress(50)
End Sub
Sub ProgressHandler(ByVal sender As Object, ByVal e As _
ProgressChangedEventArgs)
pbProgress.Value = e.ProgressPercentage
End Sub

```

Answer: D

Question: 73

You want to execute an event handler asynchronously from a Windows Form. You need to execute a method named WorkHandler by using an instance of the BackgroundWorker component named bgwExecute. Which two code segments should you use? (Each correct answer presents part of the solution. Choose two.)

- A. Dim work As New EventHandler(AddressOf WorkHandler)
- B. Dim work As New ThreadStart(AddressOf WorkHandler)
- C. AddHandler bgwExecute.DoWork, AddressOf WorkHandler
- D. bgwExecute.RunWorkerAsync()
- E. bgwExecute.RunWorkerAsync(work)

Answer: C, D

Question: 74

You are customizing a Windows Form to update a database asynchronously in a method named WorkHandler. You need to ensure that the form displays a message box to the user that indicates the success or failure of the update. Which code segment should you use?

```

A. Private Sub StartBackgroundProcess()
AddHandler bgwExecute.DoWork, AddressOf WorkHandler
AddHandler bgwExecute.RunWorkerCompleted, AddressOf CompletedHandler
bgwExecute.RunWorkerAsync()
End Sub
Private Sub CompletedHandler(ByVal sender As Object, ByVal e As
RunWorkerCompletedEventArgs)
Dim result As Boolean = CType(e.Result, Boolean)
If result = True Then
MessageBox.Show("Update was successful")
Else
MessageBox.Show("Update failed")
End If
End Sub
Private Sub WorkHandler(ByVal sender As Object, ByVal e As
DoWorkEventArgs)

```

```

..
'...

```

```

e.Result = True
End Sub
B. Private Sub StartBackgroundProcess()
AddHandler bgwExecute.ProgressChanged, AddressOf CompletedHandler
Dim tsBackground As New ThreadStart(AddressOf WorkHandler)
bgwExecute.RunWorkerAsync(tsBackground)
End Sub Private Sub ProgressHandler(ByVal sender As Object, ByVal e As
ProgressChangedEventArgs)
Dim result As Boolean = CType(e.UserState, Boolean)
If result = True Then
MessageBox.Show("Update was successful")
Else
MessageBox.Show("Update failed")
End If
End Sub
Private Sub WorkHandler()
' ...
bgwExecute.ReportProgress(100, True)
End Sub
C. Private Sub StartBackgroundProcess()
AddHandler bgwExecute.RunWorkerCompleted, AddressOf CompletedHandler
Dim tsBackground As New ThreadStart(AddressOf WorkHandler)
bgwExecute.RunWorkerAsync(tsBackground)
End Sub
Private Sub CompletedHandler(ByVal sender As Object, ByVal e As
RunWorkerCompletedEventArgs)
Dim result As Boolean = CType(e.Result, Boolean)
If result = True Then
MessageBox.Show("Update was successful")
Else
MessageBox.Show("Update failed")
End IfEnd SubPrivate Sub WorkHandler()
' ...
bgwExecute.ReportProgress(100, True)

End Sub
D. Private Sub StartBackgroundProcess()
AddHandler bgwExecute.DoWork, AddressOf WorkHandler
AddHandler bgwExecute.RunWorkerCompleted, AddressOf CompletedHandler
bgwExecute.RunWorkerAsync()
End SubPrivate Sub CompletedHandler(ByVal sender As Object, ByVal e As
RunWorkerCompletedEventArgs)
Dim result As Boolean = CType(e.Result, Boolean)
If result = True Then
MessageBox.Show("Update was successful")
Else

```

```

MessageBox.Show("Update failed")
End IfEnd SubPrivate Sub WorkHandler(ByVal sender As Object, ByVal e As
DoWorkEventArgs)
'...
bgwExecute.ReportProgress(100, True)
End Sub

```

Answer: A

Question: 75

You are creating a Windows Forms application. You want to execute a method named ProcessAmount in the background of the application. The method you want to execute requires that an integer value of 13 is passed. You need to pass an integer value of 13 to a starting background thread. Which two code segments should you use? (Each correct answer presents part of the solution. Choose two.)

- A. Dim ts As New ThreadStart(AddressOf ProcessAmount2)Dim t As New Thread(ts, 13)
- B. Dim ts As New ParameterizedThreadStart(AddressOf ProcessAmount)Dim t As New Thread(ts)
- C. t.Start()
- D. t.Start(13)

Answer: B, D

Question: 76

You are creating a Windows Forms application. You add an ErrorProvider component named erpErrors and a DateTimePicker control named dtpStartDate to the application.

The application also contains other controls.

You need to configure the application to display an error notification icon next to dtpStartDate when the user enters a date that is greater than today's date.

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

- A. For the Validating event of dtpStartDate, create an event handler named VerifyStartDate.
- B. For the Validated event of dtpStartDate, create an event handler named VerifyStartDate.
- C. In the Properties Window for dtpStartDate, set the value of Error on erpErrors to Date out of range .
- D. In VerifyStartDate, call erpErrors.SetError(dtpStartDate, "Date out of range") if the value of dtpStartDate value is greater than today's date.
- E. In VerifyStartDate, call erpErrors.SetError(dtpStartDate, null) if the dtpStartDate.Value is greater than today's date.

Answer: A, E

Question: 77

You are customizing a Windows Form. When the user clicks any button, you want the application

to log information about the user's actions by calling a method with the following signature.

```
public void ctl_Click(object sender, EventArgs e)
```

You want the form to invoke this method when any Button control is clicked and only when a Button control is clicked.

You need to modify the form to invoke this method without interfering with the existing operations of the application.

What should you do?

A. Add the following code to the form initialization.

```
foreach (Control ctl in this.Controls) {  
    if (ctl is Button) {  
        ctl.Click += new EventHandler(ctl_Click);  
    }  
}
```

B. Add the following code to the form initialization.

```
this.Click += new EventHandler(ctl_Click);
```

C. Use the Properties dialog box to set the Click event for each Button control on the form to the `ctl_Click` method.

D. Use the Properties dialog box to set the Click event of the form to the `ctl_Click` method.

Answer: A

Question: 78

You are localizing a Windows Forms application. You put all error message strings into a resource file named `ErrorMessages` file. When the resource file is compiled, a strongly typed resource class is generated.

You need to retrieve an error message named `CatastrophicErr` from the exception-handling code.

Which code segment should you use?

A. `string s = ErrorMessages.CatastrophicErr;`

B. `string s = Properties.Settings.Default["ErrorMessages_CatastrophicErr"].ToString();`

C. `StringInfo si = new StringInfo("ErrorMessages.CatastrophicErr");`

`string s = si.String;`

D. `Assembly a = Assembly.GetExecutingAssembly();`

`Stream stream = a.GetManifestResourceStream("ErrorMessage.CatastrophicErr");`

`StreamReader sr = new StreamReader(stream);`

`string s = sr.ReadToEnd();`

Answer: A

Question: 79

A Windows Forms application includes resources that are localized for several languages. You want to view your application when it uses resources that are localized for the French language as spoken in France. This culture is denoted by the culture name `fr-FR`.

You need to test the application by using the resources contained in the satellite assembly. You must not modify the regional settings of your computer.

What should you do?

A. Set the following assembly attribute.

```
[assembly: NeutralResourcesLanguage("fr-FR")]
```

B. Add the following code to the application initialization.

```
RegionInfo ri = new RegionInfo("FR");
```

```
Thread.CurrentThread.Name = ri.NativeName;
```

C. Add the following code to the application initialization.

```
Thread.CurrentThread.CurrentUICulture = new CultureInfo("fr-FR");
```

D. Add the following code to the applicationSettings section of the application configuration file.

```
<setting name="CultureInfo" serializeAs="String">
```

```
<value> "fr-FR" </value>
```

```
</setting>
```

Answer: C

Question: 80

You are creating a custom control that displays an image in the background. You notice that when the control is resized the background image.

You need to eliminate the background image flicker.

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

Choose three.)

A. `this.SetStyle(ControlStyles.OptimizedDoubleBuffer, true);`

B. `this.SetStyle(ControlStyles.AllPaintingInWmPaint, true);`

C. `this.SetStyle(ControlStyles.UserPaint, true);`

D. `this.SetStyle(ControlStyles.ResizeRedraw, true);`

E. `this.SetStyle(ControlStyles.Opaque, true);`

Answer: A, B, C

Question: 81

You are creating a custom Windows Forms control. On the background of the control, an ellipse completely filled with a colored gradient is drawn. The bounds for the ellipse are equal to the bounds for the control. The control must correctly repaint itself in all situations.

You need to include the drawing of the ellipse in the OnPaint event handler for the custom control.

Which code segment should you use?

A. `Brush linearGradientBrush = new LinearGradientBrush(e.ClipRectangle, startGradient, endGradient, 45);`

B. `Brush linearGradientBrush = new LinearGradientBrush(
new Point(this.Left, this.Top),
new Point(this.Right, this.Bottom),
startGradient, endGradient);`

```
e.Graphics.FillEllipse(linearGradientBrush, e.ClipRectangle);
C. Brush linearGradientBrush = new LinearGradientBrush(
new Rectangle(this.Left, this.Top, this.Width, this.Height),
startGradient, endGradient, 45, true);
e.Graphics.FillEllipse(linearGradientBrush,
this.Left, this.Top, this.Width, this.Height);
D. Brush linearGradientBrush = new
LinearGradientBrush(this.ClientRectangle,
startGradient, endGradient, 45);
e.Graphics.FillEllipse(linearGradientBrush, this.ClientRectangle);
```

Answer: D

Question: 82

Your law firm uses a custom application to create and print legal documents. Currently, users can print any portion of a document that they want from the application by using the options in the Print dialog box. This Print dialog box was implemented by using the PrintDialog component. New security and auditing rules state that the application must implement a business rule that requires users to print documents in their entirety. You need to modify the PrintDialog component named printDlg to enforce the business rule when a user prints. You must implement this rule with the minimum amount of impact to users. What should you do?

- A. Set the PrintDialog component to printDlg.PrinterSettings.PrintRange = PrintRange.AllPages.
 - B. Call the printDlg.Reset method when the Print dialog box is closed.
 - C. Configure the following settings for the PrintDialog component.

```
printDlg.AllowSomePages = false;
printDlg.AllowSelection = false;
printDlg.AllowCurrentPage = false;
```
 - D. Create a warning message that display if the user selects the Pages option in the Print dialog box to try to print a subset of a document.
- Use the following settings to set the full document to print.
- ```
printDlg.PrinterSettings.FromPage = printDlg.PrinterSettings.MinimumPage;
printDlg.PrinterSettings.ToPage = printDlg.PrinterSettings.MaximumPage;
```

**Answer: C**

### Question: 83

You are creating a Windows Forms application that prints reports. The application uses the PrintDocument control to print the report and the PrintPreviewDialog control to preview reports as shown in the following code segment.

```
streamToPrint = new StreamReader(@"..\..\FileToPrint.txt");
try {
PrintDocument pd = new PrintDocument();
pd.PrintPage += new PrintPageEventHandler(this.pd_PrintPage);
PrintPreviewDialog ppd = new PrintPreviewDialog();
```

```
ppd.Document = pd;
ppd.ShowDialog();
}
finally {
streamToPrint.Close();
}
```

When a report is printed by using the Print method on the PrintDocument class, the output is correct. When the report is previewed by using the Print Preview dialog box, the output is correct. However, when the report is printed by using the Print button in the Print Preview dialog box, a single blank page is produced.

You need to ensure that the output is correct when the Print button in the Print Preview dialog box is used.

What should you do?

- A. In the event handler for the ppd.Click event, set the position of the streamToPrint.BaseStream property to 0.
- B. In the event handler for the ppd.PrintPreviewControl.Click event, set the position of the streamToPrint.BaseStream property to 0.
- C. In the event handler for the pd.PrintPage event, set the position of the streamToPrint.BaseStream property to 0.
- D. In the event handler for the pd.BeginPrint event, set the position of the streamToPrint.BaseStream property to 0.

**Answer: D**

**Question: 84**

You are creating a Windows Forms application. Initialization code loads a DataSet object named ds that includes a table named Users. The Users table includes a column named IsManager.

You need to bind the IsManager column to the Checked property of a check box named chkIsManager.

Which code segment should you use?

- A. `chkIsManager.DataBindings.Add("Checked", ds, "Users.IsManager");`
- B. `chkIsManager.DataBindings.Add("Checked", ds, "IsManager");`
- C. `chkIsManager.Text = "{Users.IsManager}";`  
`chkIsManager.AutoCheck = true;`
- D. `this.DataBindings.Add("chkIsManager.Checked", ds, "Users.IsManager");`

**Answer: A**

**Question: 85**

A Windows Forms application contains the following code segment.

```
string SQL =
@"SELECT OrderID, ProductID, UnitPrice, Quantity FROM
[OrderDetails]";
SqlDataAdapter da = new SqlDataAdapter(SQL, connStr);
```

```
DataTable dt = new DataTable();
da.Fill(dt);
```

You need to add a new column to the data table named ItemSubtotal. The ItemSubtotal column must contains the named of the UnitPrice column multiplied by the value of the Quantity column. Which code segment should you use?

- A. DataColumn col = new DataColumn("ItemSubTotal");  
col.DataType = typeof(decimal);  
col.Expression = "UnitPricc \* Quantity";  
Dt.Columns.Add(col);
- B. dt.Compute("UnitPrice \* Quantity", "ItemSubtotal");
- C. DataColumn col = DataColumn("ItemSubtotal");  
col.DataType = typeof(decimal);  
dt.Columns.Add(col);  
dt.Compute(" UnitPrice \* Quantity", "ItemSubtotal");
- D. DataColumn col = new DataColumn("ItemSubtotal");  
col.DataType = typeof(decimal);  
col.DefaultValue = "UnitPrice \* Quantity";  
dt.Columns.Add(col);

**Answer: A**

**Question: 86**

You are creating a Windows Forms application. The application loads a data table named dt from a database and modifies each value in the data table.

You add the following code. (Line numbers are included for reference only.)

```
01 foreach (DataRow row in dt.Rows) {
02 foreach (DataColumn col in dt.Columns) {
03
04 Trace.WriteLine(str);
05 }
06 }
```

You need to format the string named str to show the value of the column at the time the data is loaded and the current value in the column.

Which code segment should you add at line 03?

- A. string str = String.Format("Column was {0} is now {1}",  
row[col],  
row[col, DataRowVersion.Current]);
- B. string str = String.Format("Column was {0} is now {1}",  
row[col, DataRowVersion.Default],  
row[col]);
- C. string str = String.Format("Column was {0} is now {1}",  
row[col],  
row[col, DataRowVersion.Proposed]);
- D. string str = String.Format("Column was {0} is now {1}",

```
row[col, DataRowVersion.Original],
row[col]);
```

**Answer: D**

**Question: 87**

You are creating a Windows Forms application that includes the database helper methods UpdateOrder and UpdateAccount. Each method wraps code that connect to a Microsoft SQL Server 2005 database, executes a Transact-SQL statment, and then disconnects from the database.

You must ensure that changes to the database that result from the UpdateAccount method are committed only if the UpdateOrder method succeeds.

You need to execute the UpdateAccount method and the UpdateOrder method.

Which code segment should you use?

- A. 

```
using (TransactionScope ts = new TransactionScope()) {
 UpdateOrder();
 UpdateAccount();
 ts.Complete();
}
```
- B. 

```
using (TransactionScope ts1 = new TransactionScope()) {
 updateOrder();
 using (TransactionScope ts2 = new
 TransactionSclope(TransactionScopeOption.RequiresNew)) {
 UpdateAccount();
 ts2.Complete();
 }
 ts1.Complete();
}
```
- C. 

```
using (TransactionScope ts = new
 TransactionScope(TransactionScopeOption.RequiresNew)) {
 UpdateOrders();
 ts.Complete();
}
using (TransactionScope ts = new
 TransactionScope(TransactionScopeOption.Required)) {
 UpdateAccount();
 ts.Complete();
}
```
- D. 

```
using (TransactionScope ts = new
 TransactionScope(TransactionScopeOption.RequresNew)) {
 UpdateOrder();
}
using (TransactionScope ts = new
```

**Answer: A**

**Question: 88**

You are customizing a Windows Form to use a BackgroundWorker component named bgwExecute. bgwExecute perform a database operation by an event handler named WorkHandler.

You need to ensure that users can see the progress of the database operation by viewing a progress bar named pbProgress. You want the progress bar to appear when the database operation is 50 percent complete.

Which code segment should you use?

A. `public void StartBackground() {  
 bgwExecute.WorkerReportsProgress = true;  
 bgwExecute.ProgressChanged +=  
 new ProgressChangedEventHandler(ProgressHandler);  
 bgwExecute.RunWorkerAsync();  
}  
void WorkHandler(object sender, DoWorkEventArgs e) {  
 pbProgress.ReportProgress(50);  
}  
void ProgressHandler(object sender, ProgressChangedEventArgs e) {  
 pbProgress.Value = e.ProgressPercentage;  
}  
}`

B. `public void StartBackground() {  
 bgwExecute.WorkerReportsProgress = true;  
 bgwExecute.ProgressChanged += new  
 ProgressChangedEventHandler(ProgressHandler);  
 ThreadStart t = new ThreadStart(WorkHandler);  
 bgwExecute.RunWorkerAsync(t);  
}  
void WorkHandler() {  
 bgwExecute.ReportProgress(50);  
}  
void ProgressHandler(object sender, ProgressChangedEventArgs e) {  
 bgProgress.Value = e.ProgressPercentage;  
}  
}`

C. `public void StartBackground() {  
 bgwExecute.WorkerReportsProgress = true;  
 bgwExecute.ProgressChanged += new  
 ProgressChangedEventHandler(ProgressHandler);  
 Thread t = new Thread(new ThreadStart(WorkHandler));  
 bgwExecute.RunWorkerAsync(t);  
}  
void WorkHandler() {  
 bgwExecute.ReportProgress(50);  
}  
void ProgressHandler(object sender, ProgressChangedEventArgs e) {`

```

pbProgress.Value = e.ProgressPercentage;
}
D. public void StartBackground() {
 bgwExecute.WorkerReportsProgress = true;
 bgwExecute.DoWork += new DoWorkEventHandler(WorkHandler);
 bgwExecute.ProgressChanged += new
 ProgressChangedEventHandler(ProgressHandler);
 bgwExecute.RunWorkerAsync();}
void WorkHandler(object sender, DoWorkEventArgs e)
{ bgwExecute.ReportProgress(50);}
void ProgressHandler(object sender, ProgressChangedEventArgs e) { pbProgress.Value
= e.ProgressPercentage;}

```

**Answer: D**

### **Question: 89**

You are customizing a Windows Form to asynchronously update a database in a method named WorkHandler.

You need to ensure that the form displays a message box to the user that indicates the success of failure of the update.

Which segment should you use?

```

A. private void StartBackgroundProcess() {
 bgwExecute.DoWork += new DoWorkEventHandler(WorkHandler);
 bgwExecute.RunWorkerCompleted +=
 bgwExecute.RunWorkerAsync();
}
void CompletedHandler(object sender, RunWorkerCompletedEventArgs e) {
 bool result = (bool) e.Result;
 MessageBox.Show("Update" +(result ? "was successful" : "failed"));
}
void WorkHandler(object sender, DoWorkEventArgs e) {
 // ...
 e.Result = true;
}
B. private void StartBackgroundProcess() {
 bgwExecute.ProgressChanged +=
 new ProgressChangedEventHandler(CompletedHandler);
 ThreadStart tsBackground = new ThreadStart(Work Handler);
 bgwExecute.RunWorkerAsync(tsBackground);
}
void ProgressHandler(object sender, ProgressChangedEventArgs e) {
 bool result = (bool)e.UserState;
 MessageBox.Show("Update" +(result ? "was successful" : "failed"));
}

```

```

void WorkHandler() {
// ...
bgwExecute.ReportProgress(100, true);
}
C. private void StartBackgroundProcess() {
bgwExecute.RunWorkerCompleted +=
new RunWorkerCompletedEventHandler(CompletedHandler);
ThreadStart tsBackground = new ThreadStart(Work Handler);
bgwExecute.RunWorkerAsync(tsBackground);
}
void CompletedHandlar(object sender, RunWorkerCompletedEventArgs e) {
bool result = (bool)e.Result;
MessageBox.Show("Update" +(result ? "was successful" : "failed"));
}
void WorkHandler() {
// ...
e.Result = true;
}
D. Private void StartBackgroundProcess() {
bgwExecute.DoWork += new DoWorkEventHandler(WorkHandler);
bgwExecute.RunWorkerCompleted +=
new RunWorkerCompletedEventHandler(CompletedHandler);
bgwExecute.RunWorkerAsync();
}

```

**Answer: A**

### Question: 90

You want to execute an event handler asynchronously from a Windows Form.  
You need to execute a method named WorkHandler by using an instance of the  
BackgroundWorker component named bgwExecute.  
Which two code segment should you use? (Each correct answer presents part of the solution.  
Choose two.)

- A. EventHandler work = new EventHandler(WorkHandler);
- B. ThreadStart work = new ThreadStart(WorkHandler);
- C. bgwFexecute.DoWork += new DoWorkEventHandler(WorkHandler);
- D. bgwExecute.RunWorkerAsync();
- E. bgwExecute.RunWorkerAsync(work);

**Answer: C, D**

### Question: 91

You are creating a Windows Forms application. You want to execute a method named  
ProcessAmount in the background of the application. The method you want to execute requires  
that an integer value of 13 is passed.  
You need to pass an integer value of 13 to a starting background thread.

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

- A. ThreadStart ts = new ThreadStart(ProccssAmount);  
Thread t = new Thread(ts, 13);
- B. ParameterizedThreadStart ts = new ParameterizedThreadStart(ProcessAmount);  
Thread t = new Thread(ts);
- C. t.Start();
- D. t.Start(13);

**Answer: B, D**

**Question: 92**

You are creating a Windows Forms that includes printing functionality to print an image of the form. A helper function with the following signature creates a bitmap of the current form.

```
private Bitmap CreateFormImageBitmap(Graphics graphic)
```

You need to implement the PrintPage event handler to call the helper function and draw the image onto the print document.

Which code segment should you use?

- A. Graphics g = e.Graphics; Bitmap formImageBitmap = CreateFormImageBitmap(g);  
e.Graphics.DrawImage(formImageBitmap, e.MarginBounds);
- B. Graphics g = this.CreateGraphics(); Bitmap formImageBitmap = CreateFormImageBitmap(g);  
g.DrawImage(formImageBitmap, g.ClipBounds);  
g.Dispose();
- C. Graphics g = this.CreateGraphics(); Bitmap formImageBitmap =  
CreateFormImageBitmap(e.Graphics); g.DrawImage(formImageBitmap, g.ClipBounds);  
g.Dispose();
- D. Graphics g = this.CreateGraphics(); Bitmap formImageBitmap =  
CreateFormImageBitmap(g); e.Graphics.DrawImage(formImageBitmap, e.MarginBounds);

**Answer: D**

**Question: 93**

You are creating a Windows Forms application. You create a System.Threading.Semaphore instance in the application by using the following code.

```
Semaphore threadPool = new Semaphore(0, 3); // ... threadPool.Release(4);
```

What does this code do?

- A. Sets the internal counter for the semaphore to 4.
- B. Sets the internal counter for the semaphore to 0.
- C. Throws a SemaphoreFullException.
- D. Throws a ThreadAbortException.

**Answer: C**

**Question: 94**

You are creating a Windows Form. You add a TableLayoutPanel control named pnlLayout to the form. You set the properties of pnlLayout so that it ... resize with the form.

You need to create a three-column layout that has fixed left and right columns. The fixed columns must each remain 50 pixels wide when the form is resized. The middle column must fill the remainder of the form width when the form is resized. You add the three columns in the designer. Which code segment should you use to format the columns at run time?

- A. `pnlLayout.ColumnStyles.Clear(); pnlLayout.ColumnStyles.Add(new ColumnStyle(SizeType.Absolute, 50F));  
pnlLayout.ColumnStyles.Add(new ColumnStyle(SizeType.AutoSize, 100F));  
pnlLayout.ColumnStyles.Add(new ColumnStyle(SizeType.Absolute, 50F));`
- B. `pnlLayout.ColumnStyles[0].Width = 50F; pnlLayout.ColumnStyles[0].SizeType = SizeType.Absolute; pnlLayout.ColumnStyles[2].Width = 50F;  
pnlLayout.ColumnStyles[2].SizeType = SizeType.Absolute;`
- C. `pnlLayout.ColumnStyles[0].Width = 50F; pnlLayout.ColumnStyles[0].SizeType = SizeType.Absolute; pnlLayout.ColumnStyles[1].Width = 100F;  
pnlLayout.ColumnStyles[1].SizeType = SizeType.Absolute;  
pnlLayout.ColumnStyles[2].Width = 50F; pnlLayout.ColumnStyles[2].SizeType = SizeType.Absolute;`
- D. `pnlLayout.ColumnStyles.Clear(); pnlLayout.ColumnStyles.Add(new ColumnStyle(SizeType.Absolute, 50F)); pnlLayout.ColumnStyles.Add(new ColumnStyle(SizeType.Percent, 100F)); pnlLayout.ColumnStyles.Add(new ColumnStyle(SizeType.Absolute, 50F));`

**Answer: D**

**Question: 95**

You are creating a Windows Forms application. You implement the asynchronous design pattern by using a delegate named DataUpdateHandler. DataUpdateHandler executes a method named DataUpdater. You create an instance of the DataUpdateHandler that has the variable name Updater.

DataUpdater uses a DataSet class as a parameter and returns an integer value that indicates the number of rows that have been updated.

You need to use a method name DisplayResult to display the result when the database update is complete.

Which code segment should you use?

- A. `IAsyncResult result = Updater.BeginInvoke(mData, null, null);  
// ...  
int value = (int)result.AsyncState;  
DisplayResult(value);`
- B. `IAsyncResult result = Updater.BeginInvoke(mData, null, null);  
// ...  
int value = Updater.EndInvoke(result);  
DisplayResult(value);`

```
C. IAsyncResult result = Updater.BeginInvoke(mData, null, "DisplayResults");
// ...
Updater.EndInvoke(result);
D. IAsyncResult result = Updater.BeginInvoke(mData, null, "DataUpdater");
// ...
Updater.EndInvoke(result);
```

**Answer: B**

**Question: 96**

You want to execute an event handler asynchronously from a Windows Form.

You need to write code that uses the BackgroundWorker component named bgwExecute to execute the WorkHandler method.

Which code segment should you use?

```
A. EventHandler work = new EventHandler(WorkHandler);
bgwExecute.RunWorkerAsync(work);
B. ThreadStart tsBackground = new ThreadStart(WorkHandler);
bgwExecute.ReportProgress(100, tsBackground);
C. ThreadStart tsBackground = new ThreadStart(WorkHandler);
bgwExecute.RunWorkerAsync(tsBackground);
D. bgwExecute.DoWork += new DoWorkEventHandler(WorkHandler);
bgwExecute.RunWorkerAsync();
```

**Answer: D**

**Question: 97**

You are customizing a Windows Form. The form includes a menu that has several

ToolStripMenuItem controls. An event handler is configured to handle the Click event for all ToolStripMenuItem controls. The event handler has the following signature.

```
private void menu_Click(object sender, EventArgs e)
```

The form class includes a method that has the following signature.

```
private void LogClick(string ctlName)
```

You need to add code so that when a user clicks a ToolStripMenuItem control, the menu\_Click method calls the LogClick method. The LogClick method must be called with the ctlName parameter set to the menu text in the ToolStripMenuItem control.

Which code segment should you use?

```
A. ToolStripMenuItem mnulItem = (ToolStripMenuItem)sender;
LogClick(mnulItem.Text);
B. LogClick(e.ToString());
C. LogClick(this.Text);
D. ToolStripMenuItem mnulItem = (ToolStripMenuItem)
this.GetContainerControl();
LogClick(mnulItem.Text);
```

**Answer: A**

**Question: 98**

You are creating a Windows Form that includes a TextBox control named txtDate.  
When a user right click within the text box, you want the application to display a MonthCalendar control.  
You need to implement a context menu that provides this functionality.  
What should you do?

A. Add the following code to the form initialization.

```
MonthCalendar cal = new MonthCalendar();
ContextMenuStrip mnuContext = new ContextMenuStrip();
ToolStripControlHost host = new
ToolStripControlHost(mnuContext);
txtDate.ContextMenuStrip = mnuContext;
```

B. Add the following code to the form initialization.

```
ContextMenuStrip mnuContext = new ContextMenuStrip();
MonthCalendar cal = new MonthCalendar();
ToolStripControlHost host = new
ToolStripControlHost(cal);
mnuContext.Items.Add(host);
txtDate.ContextMenuStrip = mnuContext;
```

C. Add the following code to the form initialization.

```
ToolStripContainer ctr = new ToolStripContainer();
MonthCalendar cal = new MonthCalendar();
ctr.ContentPanle.Controls.Add(cal);
txtDate.Controls.Add(ctr);
```

Add a MouseClick event handler for the TextBox control that contains the following code.

```
if (e.Button == MouseButton.Right) {
txtDate.Controls[0].Show();
}
```

D. Add a MouseClick event handler for the TextBox control that contains the following code.

```
if (e.Button == MouseButton.Right) {
ContextMenuStrip mnuContext = new ContextMenuStrip();
MonthCalendar cal = new MonthCalendar();
ToolStripControlHost host = new
```

**Answer: B**

**Question: 99**

You are creating a Windows Forms application. The application uses a SqlCommand object named cmd. The cmd object executes the following stored procedure.

```
CREATE PROCEDURE GetPhoneList
AS
BEGIN
SELECT CompnayName, Phone FROM Customers
```

```
SELECT CompanyName, Phone FROM Suppliers
END
```

You need to add all returned rows to the ListBox control named lstPhones.  
Which code segment should you use?

```
A. SqlDataReader rdr = cmd.ExecuteReader();
do {
while (rdr.Read()) {
lstPhones.Items.Add(rdr.GetString(0) + "\t"
+ rdr.GetString(1));
}
} while (rdr.NextResult());
B. SqlDataReader rdr = cmd.ExecuteReader();
while (rdr.Read()) {
lstPhones.Items.Add(rdr.GetString(0) + "\t"
+ rdr.GetString(1));
}
C. SqlDataReader rdr = cmd.ExecuteReader();
while (rdr.NextResult()) {
while (rdr.Read()) {
lstPhones.Items.Add(rdr.GetString(0) + "\t"
+ rdr.GetString(1));
}
}
D. SqlDataReader rdr = cmd.ExecuteReader();
while (rdr.NextResult()) {
lstPhones.Items.Add(rdr.GetString(0) + "\t"
+ rdr.GetString(1));
}
```

**Answer: A**

**Question: 100**

A Windows Forms application reads the following XML file.

```
<?xml version="1.0"?>
<x:catalog xmlns:x="urn:books">
<book id="bk101">
<author>Gambardella, Matthew</author>
<title>XML Developer's Guide</title>
</book>
<book id="bk102">
<author>Ralis, Kim</author>
<title>Midnight Rain</title>
</book>
</x:catalog>
```

The form initialization loads this file into an XmlDocument object named docBooks.

You need to populate a ListBox control named lstBooks with the concatenated book ID and title of each book.

Which code segment should you use?

- A. XmlNodeList elements = docBooks.GetElementsByTagName("book");  
foreach (XmlElement node in elements) {  
string s = node.GetAttribute("id") + "-";  
s += node.SelectSingleNode("title").InnerText;  
lstBooks.Items.Add(s);  
}
- B. XmlNodeList elements = docBooks.GetElementsByTagName("book");  
foreach (XmlElement node in elements) {  
string s = node.SelectSingleNode("id") + "-";  
s += node.GetAttribute("title");  
lstBooks.Items.Add(s);  
}
- C. XmlNodeList elements = docBooks.GetElementsByTagName("book");  
foreach (XmlElement node in elements) {  
string s = node.GetAttribute("id") + "-";  
s += node.SelectSingleNode("title").Value;  
lstBooks.Items.Add(s);  
}
- D. XmlNodeList elements = docBooks.GetElementsByTagName("book");  
foreach (XmlElement node in elements) {  
lstBooks.Items.Add(node.InnerXml);  
}

**Answer: A**

### Question: 101

A Windows Forms application contains the following code segment.

```
string SQL = @"SELECT EmployeeID, LastName, FirstName, FROM
Employees";
```

```
SqlDataAdapter da = new SqlDataAdapter(SQL, connStr);
```

```
DataTable dt = new DataTable();
```

```
da.MissingSchemaAction = MissingSchemaAction.AddWithKey;
```

```
SqlCommandBuilder bld = new SqlCommandBuilder(da);
```

```
da.Fill(dt);
```

The application allows the user to add rows to the data table. The application will propagate these additions to the database. If the addition of any row fails, the other rows must still be added. The code must log how many new rows to be added.

You need to propagate the additions to the database and log a failed count.

Which code segment should you use?

- A. da.ContinueUpdateError = true;  
da.Update(dt);

```

DataTable dtErrors = dt.GetChanges(DataRowState.Unchanged);
Trace.WriteLine(dtErrors.Rows.Count.ToString() +
“rows not added.”);
B. da.ContinueUpdateOnError = false;
da.Update(dt);
DataTable dtErrors = dt.getChanges(DataRowState.Unchanged);
Trace.WriteLine(dtErrors.Rows.Count.ToString() +
“rows not added.”);
C. da.ContinueUpdateOnError = true;
da.Update(dt);
DataRow[] rows = dt.GetErrors();
Trace.WriteLine(rows.Length.ToString() + “rows not added.”);
D. da.ContinueUpdateOnError = false;
da.Update(dt);
DataRow[] rows = dt.GetErrors();
TraceWriteLine(rows.Length.ToString() + “rows not added”);

```

**Answer: C**

### Question: 102

You are customizing a Windows Form to asynchronously update a database. You need to ensure that the form display a message box to the user that indicates the success or failure of the update. Which three code segment should you use? (Each correct answer presents part of the solution. Choose three.)

```

A. private void StartBackGroundProcess() {
 bgwExecute.DoWork += new DoWorkEventHandler(WorkHandler);
 bgwExecute.RunWorkerCompleted +=
 new RunWorkerCompletedEventHandler(CompletedHandler);
 bgwExecute.RunWorkerAsync();
}
B. private void StartBackgroundProcess() {
 bgwExecute.ProcessChanged +=
 new ProgressChangedEventHandler(CompletedHandler);
 ThreadStart tsBackground = new ThreadStart(WorkHandler);
 bgwExecute.RunWorkerAsync(tsBackground);
}
C. private void StartBackgroundProcess() {
 bgwExecute.RunWorkerCompleted +=
 new RunWorkerCompletedEventHandler(CompletedHandler);
 ThreadStart tsBackground = new ThreadStart(WorkHandler);
 bgwExecute.RunWorkerAsync(tsBackground);
}
D. void WorkHandler(object sender, DoWorkEventArgs e) {
 // ...
}

```

```

e.Result = true;
}
E. void WorkHandler(object sender, DoWorkEventArgs e) {
// ...
bgwExecute.ReportProgress(100, true);
}
F. void CompletedHandler(object sender, RunWorkerCompletedEventArgs e) {
bool result = (bool)e.Result;
MessageBox.Show("Update" + (result ? "was successful" : "failed"));
}
G. void ProgressHandler(object sender, ProgressChangedEventArgs e)
{
bool result = (bool)e.UserState;
MessageBox.Show("Update" + (result ? "was successful" : "failed"));
}

```

**Answer: A, D, F**

### Question: 103

You are customizing a Windows Form to update a database asynchronously by using an instance of a BackgroundWorker component named bgwExecute. You start the component by using the following code.

```

private void StartBackgroundProcess() {
bgwExecute.DoWork += new DoWorkEventHandler(WorkHandler);
bgwExecute.DoWorkerCompleted +=
new DoWorkerCompletedEventHandler(CompletedHandler);
bgwExecute.ProgressChanged += new
ProgressChangedEventArgs(ProgressChanged);
bgwExecute.RunWorkerAsync();
}

```

If the UpdateDB method that is called by the BackgroundWorker component returns the value False, you need to display a message box to the user that indicates that the update failed.

Which code segment should you use?

```

A. void WorkHandler(object sender, DoWorkEventArgs e) {
if(!UpdateDB()) MessageBox.Show("Update failed");
}
B. void CompletedHandler(object sender, RunWorkerCompletedEventArgs e) {
if(!UpdateDB()) MessageBox.Show("Update failed");
}
C. void WorkHandler(object sender, DoWorkEventArgs e) {
e.Result = UpdateDB();
}
void CompletedHandler(object sender, RunWorkerCompletedEventArgs e) {
if(!(bool) e.Result) MessageBox.Show("Update failed");
}

```

```
D. void WorkHandler(object sender, DoWorkEventArgs e) {
 e.Result = UpdateDB();
}
void CompletedHandler(object sender, RunWorkerCompletedEventArgs e) {
```

**Answer: C**

**Question: 104**

You create an application that provide accessibility features. Your standard forms display a background image. When the user selects Use High Contrast in the Accessibility Options in Control Panel, you want this image to be removed.

You need to add an event to handle this accessibility setting change.

Which event should you use?

- A. this.StyleChanged
- B. SystemEvents.UserPreferenceChanged
- C. this.ChangeUICues
- D. SystemEvents.DisplaySettingsChanged

**Answer: B**

**Question: 105**

You are creating a Windows Forms application. You add an ErrorProvider component named `erpErrors` and a DateTimePicker control named `dateTimePicker1` to the application.

The application also contains other controls.

You need to configure the application to display an error notification icon next to `dateTimePicker1` when the user enters a date that is greater than today's date.

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

- A. For the Validating event of `dateTimePicker1`, create an event handler named `VerifyStartDate`.
- B. For the Validated event of `dateTimePicker1`, create an event handler named `VerifyStartDate`.
- C. In the Properties Window for `dateTimePicker1`, set the value of Error on `erpErrors` to Date out of range .
- D. In `VerifyStartDate`, call `erpErrors.SetError(dateTimePicker1, "Date out of range")` if the value of `dateTimePicker1` value is greater than today's date.
- E. In `VerifyStartDate`, call `erpErrors.SetError(dateTimePicker1, null)` if the `dateTimePicker1.Value` is greater than today's date.

**Answer: A, E**

**Question: 106**

You are creating a Windows Form that includes a TextBox control named `txtDate`. When a user right-clicks within the text box, you want the application to display a MonthCalendar control. You need to implement a context menu that provides this functionality. What should you do?

A. Add the following code to the form initialization.

```
MonthCalendar ^cal = gcnew MonthCalendar();
ContextMenuStrip ^mnuContext = gcnew ContextMenuStrip();
ToolStripControlHost ^host = gcnew ToolStripControlHost(mnuContext);
txtDate->ContextMenuStrip = mnuContext;
```

B. Add the following code to the form initialization.

```
ContextMenuStrip ^mnuContext = gcnew ContextMenuStrip();
```

```
MonthCalendar ^cal = gcnew MonthCalendar();
ToolStripControlHost ^host = gcnew ToolStripControlHost(cal);
mnuContext->Items->Add(host);
txtDate->ContextMenuStrip = mnuContext;
```

C. Add the following code to the form initialization.

```
ToolStripContainer ^ctr = gcnew ToolStripContainer();
```

```
MonthCalendar ^cal = gcnew MonthCalendar();
ctr->ContentPanel->Controls->Add(cal);
txtDate->Controls->Add(ctr);
```

Add a MouseClick event handler for the TextBox control that contains the following code.

```
if (e->Button == MouseButton::Right) { txtDate->Controls[0]->Show();
}
```

D. Add a MouseClick event handler for the TextBox control that contains the following code.

```
if (e->Button == MouseButton::Right) { ContextMenuStrip ^mnuContext = gcnew ContextMenuStrip();
```

```
MonthCalendar ^cal = gcnew MonthCalendar();
ToolStripControlHost ^host = gcnew ToolStripControlHost(cal);
mnuContext->Items->Add(host);
txtDate->ContextMenuStrip = mnuContext;
}
```

**Answer: B**

### Question: 107

You are creating a Windows Form. You add a TableLayoutPanel control named pnlLayout to the form. You set the properties of pnlLayout so that it will resize with the form. You need to create a three-column layout that has fixed left and right columns. The fixed columns must each remain 50 pixels wide when the form is resized. The middle column must fill the remainder of the form width when the form is resized. You add the three columns in the designer. Which code segment should you use to format the columns at run time?

A. 

```
pnlLayout->ColumnStyles->Clear();
pnlLayout->ColumnStyles->Add(gcnew Column Style(SizeType::Absolute, 50));
pnlLayout->ColumnStyles->Add(gcnew ColumnStyle(SizeType::AutoSize, 100));
pnlLayout->ColumnStyles->Add(gcnew ColumnStyle(SizeType::Absolute, 50));
```

B. 

```
pnlLayout->ColumnStyles[0]->Width 50;
pnlLayout->ColumnStyles[0]->SizeType = SizeType::Absolute;
pnlLayout->ColumnStyles[2]->Width = 50;
pnlLayout->ColumnStyles[2]->SizeType = SizeType::Absolute;
```

```

C. pnlLayout->ColumnStyles[0]->Width = 50;
pnlLayout->ColumnStyles[0]->SizeType = SizeType::Absolute;
pnlLayout->ColumnStyles[1]->Width = 100;
pnlLayout->ColumnStyles [1]->SizeType = SizeType::AutoSize;
pnlLayout->ColumnStyles[2]->Width = 50;
pnlLayout->ColumnStyles[2]->SizeType = SizeType::Absolute;
D. pnlLayout->ColumnStyles->Clear();
pnlLayout->ColumnStyles->Add(gcnew ColumnStyle(SizeType::Absolute, 50));
pnlLayout->ColumnStyles->Add(gcnew ColumnStyle(SizeType::Percent, 100));
pnlLayout->ColumnStyles->Add(gcnew ColumnStyle(SizeType::Absolute, 50));

```

**Answer: D**

### Question: 108

You are customizing a Windows Form. The form includes a menu that has several ToolStripMenuItem controls. An event handler is configured to handle the Click event for all ToolStripMenuItem controls. The event handler has the following signature.

```
private: void mnu_Click(Object ^sender, EventArgs ^e)
```

The form class includes a method that has the following signature.

```
private: void LogClick(String ^ctlName)
```

You need to add code so that when a user clicks a ToolStripMenuItem control, the mnu\_Click method calls the LogClick method. The LogClick method must be called with the ctlName parameter set to the menu text in the ToolStripMenuItem control. Which code segment should you use?

```

A. ToolStripMenuItem ^mnuItem = (ToolStripMenuItem^)sender;
LogClick(mnuItem->Text);
B. LogClick(e->ToString());
C. LogClick(this->Text);
D. ToolStripMenuItem ^mnuItem = (ToolStripMenuItem^) this->GetContainerControl();
LogClick(mnuItem->Text);

```

**Answer: A**

### Question: 109

You are localizing a Windows Forms application. You put all error message strings into a resource file named ErrorMessages.resx. When the resource file is compiled, a strongly typed resource class is generated. You need to retrieve an error message named CatastrophicErr from the exception-handling code. Which code segment should you use?

```

A. ResourceManager ^LocRM = gcnew ResourceManager("TestApp.ErrorMessages",
System::Reflection::Assembly::GetExecutingAssembly());
String ^s = LocRM->GetString("CatastrophicErr");
B. String s =
ConfigurationSettings::AppSettings["ErrorMessages_CatastrophicErr"]->ToString();
C. StringInfo ^si = gcnew StringInfo(" ErrorMessages .CatastrophicErr");

```

```
String ^s = si->String;
D. Assembly ^a = Assembly::GetExecutingAssembly();
Stream ^stream = a->GetManifestResourceStream("ErrorMessages.CatastrophicErr");
StreamReader ^sr = gcnew StreamReader(stream);
String ^s = sr->ReadToEnd();
```

**Answer: A**

**Question: 110**

You create an application that provides accessibility features. Your standard forms display a background image. When the user selects Use High Contrast in the Accessibility Options in Control Panel, you want this image to be removed. You need to add an event to handle this accessibility setting change. Which event should you use?

- A. this->StyleChanged
- B. SystemEvents::UserPreferenceChanged
- C. this->ChangeUICues
- D. SystemEvents::DisplaySettingsChanged

**Answer: B**

**Question: 111**

You are creating a Windows Form that includes printing functionality to print an image of the form. A helper function with the following signature creates a bitmap of the current form.  
private: Bitmap ^CreateFormImageBitmap(Graphics ^graphic)  
You need to implement the PrintPage event handler to call the helper function and draw the image onto the print document. Which code segment should you use?

- A. Graphics ^g = e->Graphics;  
Bitmap ^formImageBitmap = CreateFormImageBitmap(g);  
e->Graphics->DrawImage(formImageBitmap, e->MarginBounds);
- B. Graphics ^g = this->CreateGraphics();  
Bitmap ^formImageBitmap = CreateFormImageBitmap(g);  
g->DrawImage(formImageBitmap, g->ClipBounds);
- C. Graphics ^g = this->CreateGraphics();  
Bitmap ^formImageBitmap = CreateFormImageBitmap(e->Graphics);  
g->DrawImage(formImageBitmap, g->ClipBounds);
- D. Graphics ^g = this->CreateGraphics();  
Bitmap ^formImageBitmap = CreateFormImageBitmap(g);  
e->Graphics->DrawImage(formImageBitmap, e->MarginBounds);

**Answer: D**

**Question: 112**

Your law firm uses a custom application to create and print legal documents. Currently, users can print any portion of a document that they want from the application by using the options in the

Print dialog box. This Print dialog box was implemented by using the PrintDialog component. New security and auditing rules state that the application must implement a business rule that requires users to print documents in their entirety. Printing only portions of a document is prohibited. You need to modify the PrintDialog component named printDlg to enforce the business rule when a user prints. You must implement this rule with the minimum amount of impact to users. What should you do?

- A. Set the PrintDialog component to printDlg->PrinterSettings->PrintRange = PrintRange::AllPages.
- B. Call the printDlg->Reset method when the Print dialog box is closed.
- C. Configure the following settings for the PrintDialog Component.printDlg->AllowSomePages = false; printDlg->AllowSelection = false; printDlg->AllowCurrentPage = false;
- D. Create a warning message that displays if the user selects the Pages option in the Print dialog box to try to print a subset of a document. Use the following settings to set the full document to print.printDlg->PrinterSettings->FromPage = printDlg->PrinterSettings->MinimumPage; printDlg->PrinterSettings->ToPage = printDlg->PrinterSettings->MaximumPage;

**Answer: C**

### Question: 113

A Windows Forms application contains the following code segment.  
String ^SQL = "SELECT EmployeeID, LastName, FirstName FROM Employees";

```
SqlDataAdapter ^da = gcnew SqlDataAdapter(SQL, connStr);
DataTable ^dt = gcnew DataTable();
da->MissingSchemaAction = MissingSchemaAction::AddWithKey;
SqlCommandBuilder ^bld = gcnew SqlCommandBuilder(da);
da->Fill(dt);
```

The application allows the user to add rows to the data table. The application will propagate these additions to the database. If the addition of any row fails, the other rows must still be added. The code must log how many new rows failed to be added. You need to propagate the additions to the database and log a failed count. Which code segment should you use?

- A. da->ContinueUpdateOnError = true;  
da->Update(dt);  
DataTable ^dtErrors = dt->GetChanges(DataRowState::Unchanged);  
Trace::WriteLine(dtErrors->Rows->Count.ToString() + "rows not added.");
- B. da->ContinueUpdateOnError = false;  
da->Update(dt);  
DataTable ^dtErrors = dt->GetChanges(DataRowState::Unchanged);  
Trace::WriteLine(dtErrors->Rows->Count.ToString() + " rows not added.");
- C. da->ContinueUpdateOn Error = true;  
da->Update(dt);

```
array<DataRow> ^rows = dt->GetErrors();
Trace::WriteLine(rows->Length.ToString() + " rows not added.");
D. da->ContinueUpdateOnError = false;
da->Update(dt);
array<DataRow> ^rows = dt->GetErrors();
Trace::WriteLine(rows->Length.ToString() + " rows not added.");
```

**Answer: C**

#### Question: 114

You are creating a Windows Forms application. The application uses a SqlCommand object named cmd. The cmd object executes the following stored procedure.

```
CREATE PROCEDURE GetPhoneList
```

```
AS
```

```
BEGIN
```

```
SELECT CompanyName, Phone FROM Customers
```

```
SELECT CompanyName, Phone FROM Suppliers
```

```
END
```

You need to add all returned rows to the ListBox control named lstPhones. Which code segment should you use?

- A. SqlDataReader ^rdr = cmd->ExecuteReader();  
do { while (rdr->Read()) { lstPhones->Items->Add(rdr->GetString(0) + "\t" +  
rdr->GetString(1));  
}} while (rdr->NextResult());
- B. SqlDataReader ^rdr = cmd->ExecuteReader();  
while (rdr->Read()) { lstPhones->Items->Add(rdr->GetString(0) + "\t" +  
rdr->GetString(1));  
}
- C. SqlDataReader ^rdr = cmd->ExecuteReader();  
while (rdr->NextResult()) { while (rdr->Read()) {  
lstPhones->Items->Add(rdr->GetString(0) + "\t" + rdr->GetString(1));  
}}}
- D. SqlDataReader ^rdr = cmd->ExecuteReader();  
while (rdr->NextResult()) { lstPhones->Items->Add(rdr->GetString(0) + "\t" +  
rdr->GetString(1));  
}

**Answer: A**

#### Question: 115

A Windows Forms application reads the following XML file.

```
<?xml version="1.0"?>
<x:catalog xmlns:x="urn:books">
<book id="bk101">
<author>Gambardella, Matthew</author>
<title>XML Developer's Guide</title>
```

```

</book>
<book id="bk102">
<author>Ralls, Kim</author>
<title>Midnight Rain</title>
</book>
</x:catalog>

```

The form initialization loads this file into an XmlDocument object named docBooks. You need to populate a ListBox control named lstBooks with the concatenated book ID and title of each book. Which code segment should you use?

- A. XmlNodeList ^elements = docBooks->GetElementsByTagName("book");  
for each (XmlElement ^node in elements) { String ^S = node->GetAttribute("id") + "-";  
s += node->SelectSingleNode("title")->InnerText;  
lstBooks->Items->Add(s);  
}
- B. XmlNodeList ^elements = docBooks->GetElementsByTagName("book");  
for each (XmlElement ^node in elements) { String ^s = node->SelectSingleNode("id") +  
“-”;  
s += node->GetAttribute("title");  
lstBooks->Items->Add(s);  
}
- C. XmlNodeList elements = docBooks->GetElementsByTagName("book");  
for each (XmlElement ^node in elements) { String ^s = node->GetAttribute("id") + “-”;  
s += node->SelectSingleNode("title")->Value;  
lstBooks->Items->Add(s);  
}
- D. XmlNodeList ^elements = docBooks->GetElementsByTagName("book");  
for each (XmlElement ^node in elements) { lstBooks->Items->Add(node->InnerXml);  
}

**Answer: A**

### Question: 116

You are creating a Windows Forms application. You implement the asynchronous design pattern by using a delegate named DataUpdateHandler. DataUpdateHandler executes a method named DataUpdater. You create an instance of the DataUpdateHandler that has the variable name Updater. DataUpdater uses a DataSet class as a parameter and returns an integer value that indicates the number of rows that have been updated. You need to use a method named DisplayResults to display the results when the database update is complete. Which code segment should you use?

- A. IAsyncRcsu1t^ result = Updater->BeginInvoke(mData, nullptr, nullptr);  
// ... other work or synchronization  
int value = (int)result->AsyncState;  
DisplayResults(value);
- B. IAsyncResult^ result = Updater->BeginInvoke(mData, nullptr, nullptr);  
// ... other work or synchronization  
int value = Updater->EndInvoke(result);

```

DisplayResults(value);
C. IAsyncResult^ result = Updater->BeginInvoke(mData, nullptr, "DisplayResults");
// ... other work or synchronization Updater->EndInvoke(result);
D. IAsyncResult^ result = Updater->BeginInvoke(mData, nullptr, "DataUpdater");
// ... other work or synchronization Updater->EndInvoke(result);

```

**Answer: B**

**Question: 117**

You are customizing a Windows Form to asynchronously update a database. You need to ensure that the form displays a message box to the user that indicates the success or failure of the update. Which three code segments should you use? (Each correct answer presents part of the solution. Choose three.)

```

A. private: void StartBackgroundWorkerProcess() { bgwExecute->DoWork += gcnew
DoWorkEventHandler(this, &Form1::WorkHandler);
bgwExecute->RunWorkerCompleted += gcnew
RunWorkerCompletedEventHandler(this, &Form1::CompletedHandler);
bgwExecute->RunWorkerAsync();
}
B. private: void StartBackgroundWorkerProcess() { bgwExecute->ProgressChanged +=
gcnew ProgressChangedEventHandler(this, &Form1::CompletedHandler);
ThreadStart^ tsBackground = gcnew ThreadStart(this, &Form1::WorkHandler);
bgwExecute->RunWorkerAsync(tsBackground);
}
C. private: void StartBackgroundWorkerProcess() { bgwExecute->RunWorkerCompleted
= gcnew Run WorkerCompletedEventHandler(this, &Form1::CompletedHandler);
ThreadStart^ tsBackground = gcnew ThreadStart(this, &Form1::WorkHandler);
bgwExecute->RunWorkerAsync(tsBackground);
}
D. void WorkHandler(Object^ sender, DoWorkEventArgs^ e) { // ... e->Result = true;
}
E. void WorkHandler(Object^ sender, DoWorkEventArgs^ e) { // ...
BgwExecute->ReportProgress(100, true);
}
F. void CompletedHandler(Object^ sender, RunWorkerCompletedEventArgs^ e){ bool
result = (bool)e->Result;
MessageBox::Show("Update" + (result ? "was successful" : "failed"));
}
G. void CompletedHandler(Object^ sender, ProgressChangedEventArgs^ e){ bool result
= (bool)e->UserState;
MessageBox::Show("Update" + (result ? "was successful" : "failed"));
}

```

**Answer: A, D, F**

**Question: 118**

You want to execute an event handler asynchronously from a Windows Form. You need to write code that uses the BackgroundWorker component named bgwExecute to execute the WorkHandler method. Which code segment should you use?

- A. `EventHandler^ work = gcnew EventHandler(this, &Form1::WorkHandler);  
bgwExecute->RunWorkerAsync(work);`
- B. `ThreadStart^ tsBackground = gcnew ThrcadStart(this, &Form1::WorkHandler);  
bgwExecute->ReportProgress(100,tsBackground);`
- C. `ThreadStart^ tsBackground = new ThreadStart(this, &Form1::WorkHandler);  
bgwExecute->RunWorkerAsync(tsBackground);`
- D. `bgwExecute->DoWork += new DoWorkEventHandler(this, &Form1::WorkHandler);  
bgwExecute->RunWorkerAsync();`

**Answer: D**

**Question: 119**

You are customizing a Windows Form to update a database asynchronously by using an instance of a BackgroundWorker component named bgwExecute. You start the component by using the following code.

```
private: void StartBackgroundProcess(){
 bgwExecute->DoWork += gcnew DoWorkEventHandler(this,
 &Form1::WorkHandler);
 bgwExecute->RunWorkerCompleted +=
 gcnew RunWorkerCompletedEventHandler(this,
 &Form1::CompletedHandler);
 bgwExecute->WorkerReportsProgress = true;
 bgwExecute->ProgressChanged += gcnew
 ProgressChangedEventHandler(this, &Form1::ProgressChanged);
 bgwExecute->RunWorkerAsync();
}
```

If the UpdateDB method that is called by the BackgroundWorker component returns the value False, you need to display a message box to the user that indicates that the update failed. Which code segment should you use?

- A. `void WorkHandler(Object^ sender, DoWorkEventArgs^ e) { if (!UpdateDB())  
MessageBox::Show("Update failed");  
}`
- B. `void CompletedHandler(Object^ sender, RunWorkerCompletedEventArgs^ e){ if (!  
UpdateDB()) MessageBox::Show("Update failed");  
}`
- C. `void WorkHandler(Object^ sender, DoWorkEventArgs^ e) { e->Result = UpdateDB();  
} void CompletedHandler(Object^ sender, RunWorkerCompletedEventArgs^ e) { if  
(! (bool) e->Result) MessageBox::Show("Update failed");  
}`
- D. `void WorkHandler(Object^ sender, DoWorkEventArgs^ e) { e->Result =`

```

UpdateDB();
} void CompletedHandler(Object^ sender, RunWorkerCompletedEventArgs^ e) { if
(! (bool) e->Result) bgwExecute->ReportProgress(0);
} void ProgressChanged(Object^ sender, ProgressChangedEventArgs^ e) { if
(e->ProgressPercentage==0) MessageBox::Show("Update failed");
}

```

**Answer: C**

**Question: 120**

You are creating a Windows Forms application. You create a System.Threading.Semaphore instance in the application by using the following code.

```

Semaphore^ threadPool = gcnew Semaphore(0, 3)
;
//...
threadPool->Release(4);

```

What does this code do?

- A. Sets the internal counter for the semaphore to 4.
- B. Sets the internal counter for the semaphore to 0.
- C. Throws a SemaphoreFullException.
- D. Throws a ThreadAbortException.

**Answer: C**

**Question: 121**

You are customizing a Windows Form to use a BackgroundWorker component named bgwExecute. bgwExecute performs a database operation in an event handler named WorkHandler. You need to ensure that users can see the progress of the database operation by viewing a progress bar named pbProgress. You want the progress bar to appear when the database operation is 50 percent complete. Which code segment should you use?

- A. public: void StartBackground() { bgwExecute->WorkerReportsProgress = true; bgwExecute->ProgressChanged += gcnew ProgressChangedEventHandler(this, &SolutionA::ProgressChanged); bgwExecute->RunWorkerAsync(); }
- void WorkHandler(Object^ sender, DoWorkEventArgs^ e){ bgwExecute->ReportProgress(50); }
- void ProgressChanged(Object^ sender, ProgressChangedEventArgs^ e){ pbProgress->Value = e->ProgressPercentage; }
- B. public: void StartBackground() { bgwExecute->WorkerReportsProgress = true; bgwExecute->ProgressChanged += gcnew ProgressChangedEventHandler(this, &SolutionB::ProgressChanged); ThreadStart^ t = gcnew ThreadStart(this, &SolutionB::WorkHandler); }

```

bgwExecute->RunWorkerAsync(t);
}
Void WorkHandler() { bgwExecute->ReportProgress(50);
}
void ProgressChanged(Object^ sender, ProgressChangedEventArgs^ e)
{ pbProgress->Value = e->ProgressPercentage;
}
C. public: void StartBackground() { bgwExecute->WorkerReportsProgress = true;
bgwExecute->ProgressChanged += gcnew ProgressChangedEventHandler(this,
&SolutionC::ProgressChanged);
Thrcad^ t = gcnew Thread(gcnew ThreadStart(this, &SolutionC::WorkHandler));
bgwExecute-> RunWorkerAsync(t);
} void WorkHandler() { bgwExecute->ReportProgress(50);
} void ProgressChanged(Object^ sender, ProgressChangedEventArgs^ e) {
pbProgress->Value = e->ProgressPercentage;
}
D. public: void StartBackground() { bgwExecute->WorkerReportsProgress = true;
bgwExecute->DoWork += gcnew DoWorkEventHandler(this,
&SolutionD::WorkHandler);
bgwExecute->ProgressChanged += gcnew ProgressChangedEventHandler(this,
&SolutionD::ProgressHandler);
bgwExecute->RunWorkerAsync();
} void WorkHandler(Object^ sender, DoWorkEventArgs^ e) {
bgwExecute->ReportProgress(50);
} void ProgressHandler(Object^ sender, ProgressChangedEventArgs^ e) {
pbProgress->Value = e->ProgressPercentage;
}

```

**Answer: D**

### Question: 122

You want to execute an event handler asynchronously from a Windows Form. You need to execute a method named WorkHandler by using an instance of the BackgroundWorker component named bgwExecute. Which two code segments should you use? (Each correct answer presents part of the solution. Choose two.)

- A. EventHandler^ work = gcnew EventHandler(this, &Form1::WorkHandler);
- B. ThreadStart^ work = gcnew ThreadStart(this, &Form1::WorkHandler);
- C. bgwExecute->DoWork += gcnew DoWorkEventHandler(this, &Form1::WorkHandler);
- D. bgwExecute->RunWorkerAsync();
- E. bgwExecute->RunWorkerAsync(work);

**Answer: C, D**

### Question: 123

You are creating a Windows Forms application. You want to execute a method named

ProcessAmount in the background of the application. The method you want to execute requires that an integer value of 13 is passed. You need to pass an integer value of 13 to a starting background thread. Which two code segments should you use? (Each correct answer presents part of the solution. Choose two.)

- A. ThreadStart^ ts = gcnew ThreadStart(this, &Form1::ProcessAmount);  
Thread^ t = new Thread(ts, 13);
- B. ParameterizedThreadStart^ ts = gcnew ParameterizedThreadStart(this, &Form1::ProcessAmount);  
Thread^ t = gcnew Thread(ts);
- C. t->Start();
- D. t->Start(13);

**Answer: B, D**

#### Question: 124

You are customizing a Windows Form to update asynchronously a database in a method named WorkHandler. You need to ensure that the form displays a message box to the user that indicates the success or failure of the update. Which code segment should you use?

- A. private: Void StartBackgroundProcess() { bgwExecute->DoWork += gcnew DoWorkEventHandler(this, &Form1::WorkHandler);  
bgwExecute->RunWorkerCompleted += gcnew RunWorkerCompletedEventHandler(this, &Form1::CompletedHandler);  
bgwExecute->RunWorkerAsync();  
}  
Void CompletedHandler(Object^ sender, RunWorkerCompletedEventArgs^ e){ bool result = (bool)e->Result;  
MessageBox::Show(“Update” + (result? “was Successful” : “Failed”));  
}  
Void WorkHandler(Object^ sender, DoWorkEventArgs^ e) { // ... e->Result = true;  
}
- B. private: Void StartBackgroundProcess() { bgwExecute->ProgressChanged += gcnew ProgressChangedEventHandler(this, &Form1::ProgressHandler);  
ThreadStart^ tsBackground = gcnew Thread Start(this, &Form1::WorkHandler);  
bgwExecute-> RunWorkerAsync(tsBackground);  
}  
Void ProgressHandler(Object^ sender, ProgressChangedEventArgs^ e) { bool result = (bool)e->UserState;  
MessageBox::Show(“Update” + (result ? “was successful” : “failed”));  
}  
Void WorkHandler() { // ... bgwExecute->ReportProgress(100, true);  
}
- C. private: Void StartBackgroundProcess(){ bgwExecute->RunWorkerCompleted += gcnew RunWorkerCompletedEventHandler(this, &SolutionC::CompletedHandler);  
ThreadStart^ tsBackground = gcnew ThreadStart(this, &SolutionC::WorkHandler);

```

bgwExecute->RunWorkerAsync(tsBackground);
}
Void CompletedHandler(Object^ sender, RunWorkerCompletedEventArgs^ e){ bool
result = (bool)e->Result;
MessageBox::Show("Update" + (result ? "was successful" : "Failed"));
}
Void WorkHandler() { // ... bgwExecute->ReportProgress(100, true);
}
D. private: Void StartBackgroundProcess() { bgwExecute->DoWork += gcnew
DoWorkEventHandler(this, &SolutionD::WorkHandler);
bgwExecute->RunWorkerCompleted += gcnew
RunWorkerCompletedEventHandler(this, &Form1::CompletedHandler);
bgwExecute->RunWorkerAsync();
}
Void CompletedHandler(Object^ sender, RunWorkerCompletedEventArgs^ e){ bool
result = (bool)e->Result;
MessageBox::Show("Update" + (result ? "was successful" : "Failed"));
}
Void WorkHandler(Object^ sender, DoWorkEventArgs^ e) {//...
bgwExecute->ReportProgress(100, true);
}

```

**Answer: A**

### Question: 125

You are creating a Windows Forms application. The application loads a data table named dt from a database and modifies each value in the data table.

You add the following code. (Line numbers are included for reference only.)

```

01 for each (DataRow ^row in dt->Rows) {
02 for each (DataColumn ^col in dt->Columns) {
03
04 Trace::WriteLine(str);
05 }
06 }

```

You need to format the string named str to show the value of the column at the time the data is loaded and the current value in the column. Which code segment should you add at line 03?

- A. String ^str = String::Format("Column was {0} is now {1}", row[col], row[col, DataRowVersion::Current]);
- B. String ^str = String::Format("Column was {0} is now {1}", row[col, DataRowVersion::Default], row[col]);
- C. String ^str = String::Format("Column was {0} is now {1}", row[col], row[col, DataRowVersion::Proposed]);
- D. String ^str = String::Format("Column was {0} is now {1}", row[col, DataRowVersion::Original], row[col]);

**Answer: D**

**Question: 126**

A Windows Forms application contains the following code segment.

```
String ^SQL =
```

```
"SELECT OrderID, ProductID, UnitPrice, Quantity FROM
[Order Details]";
```

```
SqlDataAdapter ^da = gcnew SqlDataAdapter(SQL, connStr);
```

```
DataTable ^dt = gcnew DataTable();
```

```
da->Fill(dt);
```

You need to add a new column to the data table named ItemSubtotal. The ItemSubtotal column must contain the value of the UnitPrice column multiplied by the value of the Quantity column. Which code segment should you use?

A. DataColumn ^col = gcnew DataColumn("ItemSubtotal");

```
col->DataType = System::Decimal::typeid;
```

```
col->Expression = "UnitPrice * Quantity";
```

```
dt->Columns->Add(col);
```

B. dt->Compute("UnitPrice \* Quantity", "ItemSubtotal");

C. DataColumn ^col = gcnew DataColumn("ItemSubtotal");

```
col ->DataType = System::Decimal::typeid;
```

```
dt->Columns->Add(col);
```

```
dt->Compute("UnitPrice * Quantity", "ItemSubtotal");
```

D. DataColumn ^col = gcnew DataColumn("ItemSubtotal");

```
col->DataType = System::Decimal::typeid;
```

```
col->DefaultValue = "UnitPrice * Quantity";
```

```
dt->Columns->Add(col);
```

**Answer: A**

**Question: 127**

You are creating a Windows Forms application that includes the database helper methods UpdateOrder and UpdateAccount. Each method wraps code that connects to a Microsoft SQL Server 2005 database, executes a Transact-SQL statement, and then disconnects from the database. You must ensure that changes to the database that result from the UpdateAccount method are committed only if the UpdateOrder method succeeds. You need to execute the UpdateAccount method and the UpdateOrder method. Which code segment should you use?

A. TransactionScope ^ts = gcnew TransactionScope();

```
try { UpdateOrder();
```

```
UpdateAccount();
```

```
ts->Complete();
```

```
} finally { delete ts;
```

```
}
```

B. TransactionScope ^ts1 = gcnew TransactionScope();

```

try { UpdateOrder();
TransactionScope ^ts2 = gcnew
TransactionScope(TransactionScopeOption::RequiresNew);
try { UpdatcAccount();
ts2->Complete();
} finally { delete ts2;
} ts 1 ->Complete();
} finally { delete ts1;
}
C. TransactionScope ^ts = gcnew
TransactionScope(TransactionScopeOption::RequiresNew);
try { UpdateOrder();
ts->Complete();
} finally { delete ts;
} ts = gcnew TransactionScope(TransactionScopeOption::Required);
try { UpdateAccount();
ts->Complete();
} finally { delete ts;
}
D. TransactionScope ^ts = gcnew
TransactionScope(TransactionScopcOption:: RequiresNew);
try { UpdateOrder();
} finally { delete ts;
} TransactionScope ^ts = gcnew TransactionScope(TransactionScopeOption::Required);
try { UpdateAccount();
ts->Complete();
} finally { delete ts;
}

```

**Answer: A**

### Question: 128

You are creating a Windows Forms application. Initialization code loads a DataSet object named ds that includes a table named Users. The Users table includes a column named IsManager. You need to bind the IsManager column to the Checked property of a check box named chkIsManager. Which code segment should you use?

- A. `chkIsManager->DataBindings->Add( "Checked", ds, "Users. IsManager");`
- B. `chkIsManager->DataBindings->Add("Checked", ds. "IsManager");`
- C. `chkIsManager->Text = "{Users.IsManager}";`  
`chkIsManager->AutoChcck = true;`
- D. `this->DataBindings->Add("chkIsManager.Checked", ds, "Users.IsManager");`

**Answer: A**

### Question: 129

You are customizing a Windows Form. When the user clicks any button, you want the application to log information about the users actions by calling a method with the following signature.

public:

```
System::Void ctl_Click(Object ^sender, EventArgs ^e)
```

You want the form to invoke this method when any Button control is clicked and only when a Button control is clicked. You need to modify the form to invoke this method without interfering with the existing operations of the application. What should you do?

- A. Add the following code to the form initialization.

```
for each (Control ^ctl in this->Controls) { if (dynamic_cast< Button ^>(ctl) != nullptr){ ctl->Click += gcnew EventHandler(this, &Form1::ctl_Click); } }
```
- B. Add the following code to the form initialization.

```
this->Click += gcnew EventHandler(this, &Form1::ctl_Click);
```
- C. Use the Properties dialog box to set the Click event for each Button control on the form to the `ctl_Click` method.
- D. Use the Properties dialog box to set the Click event of the form to the `ctl_Click` method.

**Answer: A**

### Question: 130

You are creating a Windows Forms application. You add an `ErrorProvider` component named `erpErrors` and a `DateTimePicker` control named `ntpStartDate` to the application.

The application also contains other controls. You need to configure the application to display an error notification icon next to `ntpStartDate` when the user enters a date that is greater than today's date. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. For the `Validating` event of `ntpStartDate`, create an event handler named `VerifyStartDate`.
- B. For the `Validated` event of `ntpStartDate`, create an event handler named `VerifyStartDate`.
- C. In the Properties Window for `ntpStartDate`, set the value of `Error` on `erpErrors` to `Date out of range`.
- D. In `VerifyStartDate`, call `erpErrors->SetError(ntpStartDate, "Date out of range")` if the value of `ntpStartDate->Value` is greater than today's date.
- E. In `VerifyStartDate`, call `erpErrors->SetError(ntpStartDate, "")` if the value of `ntpStartDate->Value` is greater than today's date.

**Answer: A, E**

### Question: 131

You are creating a custom control that displays an image in the background. You notice that when the control is resized, the background image flickers while the control is repeatedly repainted. You need to eliminate the background image flicker. Which three code segments should you use? (Each correct answer presents part of the solution. Choose three.)

- A. `this->SetStyle(ControlStyles::OptimizedDoubleBuffer, true);`

B. this->SetStyle(ControlStyles::AllPaintingInWmPaint, true);  
C. this->SetStyle(ControlStyles::UserPaint, true);  
D. this->SetStyle(ControlStyles::ResizeRedraw, true);  
E. this->SetStyle(ControlStyles::Opaque, true);

**Answer: A, C, D**

**Question: 132**

You are creating a custom Windows Forms control. On the background of the control, an ellipse completely filled with a colored gradient is drawn. The bounds for the ellipse are equal to the bounds for the control. The control must correctly repaint itself in all situations. You need to include the drawing of the ellipse in the OnPaint event handler for the custom control. Which code segment should you use?

A. Brush ^linearGradientBrush = gcnew LinearGradientBrush(e->ClipRectangle, startGradient, endGradient, 45);  
e->Graphics->FillEllipse(linearGradientBrush, e->ClipRectangle);  
B. Brush ^linearGradientBrush = gcnew LinearGradientBrush( Point(this->Left, this->Top), Point(this->Right, this->Bottom), startGradient, endGradient);  
e->Graphics->FillEllipse(linearGradientBrush, e->ClipRectangle);  
C. Brush ^linearGradientBrush = gcnew LinearGradientBrush( Rectangle(this->Left, this->Top), this->Width, this->Height), startGradient, endGradient, 45, true);  
e->Graphics->FillEllipse(linearGradientBrush, this->Left, this->Top, this->Width, this->Height);  
D. Brush ^linearGradientBrush = gcnew LinearGradientBrush(this->ClientRectangle, startGradient, endGradient, 45);  
e->Graphics->FillEllipse(linearGradientBrush, this->ClientRectangle);

**Answer: D**

**Question: 133**

You are creating a Windows Forms application that prints reports. The application uses the PrintDocument control to print the report and the PrintPreviewDialog control to preview reports as shown in the following code segment.

```
streamToPrint = gcnew StreamReader("../..\\FileToPrint.txt");
try {
 PrintDocument ^pd = gcnew PrintDocument();
 pd->PrintPage +=
 gcnew PrintPageEventHandler(this, & Form1::pd_PrintPage);
 PrintPreviewDialog ^ppd = gcnew PrintPreviewDialog();
 ppd->Document = pd;
 ppd->ShowDialog();
}
finally {
 streamToPrint->Close();
}
```

When a report is printed by using the Print method on the PrintDocument class, the output is correct. When the report is previewed by using the Print Preview dialog box, the output is correct. However, when the report is printed by using the Print button in the Print Preview dialog box, a single blank page is produced. You need to ensure that the output is correct when the Print button in the Print Preview dialog box is used. What should you do?

- A. In the event handler for the ppd\_Click event, set the position of the streamToPrint->BaseStream property to 0.
- B. In the event handler for the ppd\_PrintPreviewControl\_Click event, set the position of the streamToPrint->BaseStream property to 0.
- C. In the event handler for the pd\_PrintPage event, set the position of the streamToPrint->BaseStream property to 0.
- D. In the event handler for the pd\_BeginPrint event, set the position of the streamToPrint->BaseStream property to 0.

**Answer: D**

**Question: 134**

A Windows Forms application includes resources that are localized for several languages. You want to view your application when it uses resources that are localized for the French language as spoken in France. This culture is denoted by the culture name fr-FR. You need to test the application by using the resources contained in the satellite assembly. You must not modify the regional settings of your computer. What should you do?

- A. Set the following assembly attribute.[assembly: NeutralResourcesLanguage("fr-FR")];
- B. Add the following code to the application initialization.RegionInfo^ ri = gcnew RegionInfo("FR");  
Thread::CurrentThread->Name = ri->NativeName;
- C. Add the following code to the application  
Initialization.Thread::CurrentThread->CurrentUICulture = gcnew CultureInfo("fr-FR");
- D. Add the following code to the applicationSettings section of the application configuration file.<setting name="CultureInfo" serializeAs="String">  
<value>"fr-FR"</value></setting>

**Answer: C**

**Question: 135**

You use Reflection to obtain information about a method named MyMethod. You need to ascertain whether MyMethod is accessible to a derived class. What should you do?

- A. Call the IsAssembly property of the MethodInfo class.
- B. Call the IsVirtual property of the MethodInfo class.
- C. Call the IsStatic property of the MethodInfo class.
- D. Call the IsFamily property of the MethodInfo class.

**Answer: D**

**Explanation:**

The IsFamily property determines whether the method is accessible onlsecy to the class and descendant classes.

IsAssembly determines accessibility from within the assembly.

IsVirtual indicates whether the method is virtual.

IsStatic indicates whether the method is static.

**Question: 136**

You are creating a class that uses unmanaged resources. This class maintains references to managed resources on other objects. You need to ensure that users of this class can explicitly release resources when the class instance ceases to be needed. Which three actions should you perform? (Each correct answer presents part of the solution. Choose three.)

- A. Define the class such that it inherits from the WeakReference class.
- B. Define the class such that it implements the IDisposable interface.
- C. Create a class destructor that calls methods on other objects to release the managed resources.
- D. Create a class destructor that releases the unmanaged resources.
- E. Create a Dispose method that calls System.GC.Collect to force garbage collection.
- F. Create a Dispose method that releases unmanaged resources and calls methods on other objects to release the managed resources.

**Answer: B, D, F**

**Explanation:**

It is necessary to implement the IDisposable interface if you need to release unmanaged resources or want explicit control of the life of managed resources. A class destructor should be created to release the unmanaged resources and this should be called from within the Dispose method. The dispose method should also release the managed resources.

Inheriting from WeakReference would result in the garbage collector releasing resources even though there may be valid references.

The managed resources should be released in the Dispose method.

System.GC.Collect could be used, however it is more efficient to manually release the managed resources. The GC incurs overhead and may have only recently been called anyway. The question states resources should be released explicitly.

**Question: 137**

You are working on a debug build of an application.

You need to find the line of code that caused an exception to be thrown. Which property of the Exception class should you use to achieve this goal?

- A. Data
- B. Message
- C. StackTrace
- D. Source

**Answer: C**

**Explanation:**

The StackTrace property provides a listing of the current call stack.

Information such as the method calls and line numbers are shown.

Data will return additional user-defined information about the exception

Message describes the current exception but will not give details about the source code line number.

Source represents the name of the application or object that caused the error.

**Question: 138**

Your application uses two threads, named thread One and thread Two.

You need to modify the code to prevent the execution of thread One until thread Two completes execution.

What should you do?

- A. Configure threadOne to run at a lower priority.
- B. Configure threadTwo to run at a higher priority.
- C. Use a WaitCallback delegate to synchronize the threads.
- D. Call the Sleep method of threadOne.
- E. Call the SpinLock method of threadOne.

**Answer: C**

**Explanation:**

Note: Some confused why the answer is C. Using the ThreadPool and WaitCallBack will not synchronise the threads, they will run in the background in parallel

**Question: 139**

DRAG DROP

You work as a developer at Company.com. You are creating an application that provides information about the local computer. The application contains a form that lists each logical drive with the drive properties, such as type, volume label, and capacity.

You are required to write a procedure that retrieves properties of each logical drive on the local computer.

What should you do?

Arrange the appropriate actions in the correct order.

**Answer:**

**Explanation:**

To retrieve the properties of each logical drive on the system call DriveInfo.GetDrives.

Iterate through the collection retrieving each instance and access the TotalSize property.

FileSystemInfo is for file\directory manipulation.

**Question: 140**

You work as a developer at Company.com. You are creating an assembly named Company1. Company1 contains a public method. The global cache contains a second assembly named Company2.

You must ensure that the public method is only called from Company2.  
Which permission class should you use?

- A. GacIdentityPermission
- B. PublisherIdentityPermission
- C. DataProtectionPermission
- D. StrongNameIdentityPermission

**Answer: D**

**Explanation:**

StrongNameIdentityPermission can be used to verify the identity of a calling assembly.  
GACIdentityPermission can be used to test whether a file is in the global assembly cache or not.  
PublisherIdentityPermission can be used to verify the identity of a publisher.  
DataPublisherPermission is used to control the ability to access encrypted data and memory.

**Question: 141**

You are developing an application that receives events asynchronously. You create a WqlEventQuery instance to specify the events and event conditions to which the application must respond. You also create a ManagementEventWatcher instance to subscribe to events matching the query. You need to identify the other actions you must perform before the application can receive events asynchronously. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Start listening for events by calling the Start method of the ManagementEventWatcher.
- B. Set up a listener for events by using the EventArrived event of the ManagementEventWatcher.
- C. Use the WaitForNextEvent method of the ManagementEventWatcher to wait for the events.
- D. Create an event handler class that has a method that receives an ObjectReadyEventArgs parameter.
- E. Set up a listener for events by using the Stopped event of the ManagementEventWatcher.

**Answer: A, B**

**Explanation:**

The ManagementEventWatcher will not start to listen (hence the app cannot respond to Async messages) until the start method is called. Once the ManagementEventWatcher is listening it will trigger an EventArrived event every time an event occurs that matches the query. You should provide a listener for the EventArrived event to perform any custom handling.  
WaitForNextEvent method is synchronous i.e the current thread will wait until a matching event occurs  
ObjectReadyEventArgs holds data for the ObjectReadyEvent.

The Stopped event is triggered when the ManagementEventWatcher cancels its subscription i.e. is no longer interested in receiving notification of events.

**Question: 142**

You need to select a class that is optimized for key-based item retrieval from both small and large collections. Which class should you choose?

- A. OrderedDictionary class
- B. HybridDictionary class
- C. ListDictionary class
- D. Hashtable class

**Answer: B**

**Explanation:**

A HybridDictionary is implemented as a ListDictionary for small collections and a Hashtable for large collections. Hence it provides very efficient storage for both small and large collections. OrderedDictionary supports sorting based on the key. It has similar disadvantages for small collections to Hashtable on which it is based.

ListDictionary is ideal for small collections because it is implemented as a light-weight linked list. Performance will suffer for large collections.

HashTable is ideal for large collections, for small collections the overheads of such a sophisticated data structure do not compensate for the benefits.

**Question: 143**

You need to call an unmanaged function from your managed code by using platform invoke services. What should you do?

- A. Create a class to hold DLL functions and then create prototype methods by using managed code.
- B. Register your assembly by using COM and then reference your managed code from COM.
- C. Export a type library for your managed code.
- D. Import a type library as an assembly and then create instances of COM object.

**Answer: A**

**Explanation:**

It is good practice to wrap the messy P-Invoke code with a .net class.

The main benefit is to keep the client code tidy as the messy and cryptic code will be hidden away. Also better for maintenance e.g. dll name or version changes.

The question explicitly says the unmanaged code should be called with platform invoke services.

Importing/exporting a type library is relevant for interoperation with COM.

**Question: 144**

You need to identify a type that meets the following criteria: ?

Is always a number.?

Is not greater than 65,535. Which type should you choose?

- A. System.UInt16
- B. int
- C. System.String
- D. System.IntPtr

**Answer: A**

**Explanation:**

System.UInt16 is the most efficient type for storing positive whole numbers up to 65,536.

An int type could be used but it is a lot wider than necessary.

System.String is intended for storing immutable strings.

System.IntPtr is a pointer to a memory address and its size is determined by the runtime platform. It is primarily used for interoperation.

**Question: 145**

You are developing an application that will perform mathematical calculations.

You need to ensure that the application is able to perform multiple calculations simultaneously.

What should you do?

- A. Set the IdealProcessor property of the ProcessThread object.
- B. Set the ProcessorAffinity property of the ProcessThread object.
- C. For each calculation, call the QueueUserWorkItem method of the ThreadPool class.
- D. Set the Process.GetCurrentProcess().BasePriority property to High.

**Answer: C**

**Explanation:**

The ThreadPool class allows background tasks to run in parallel hence calculations can be queued to run as soon as a ThreadPool Worker thread becomes available. Because the ThreadPool can manage many worker threads, calculations will run in parallel.

ProcessThread.IdealProcessor requests a preferred processor for the thread to run on, it will not however spawn a new thread - which is what is required here to enable concurrency.

ProcessorAffinity gets or sets the processors that this thread can be scheduled to run on.

Process.BasePriority gets the base priority of the process.

**Question: 146**

Company.com uses an application named Application1 that was compiled by using the .NET Framework version 1.0. The application currently runs on a shared computer on which the .NET Framework versions 1.0 and 1.1 are installed.

You need to move the application to a new computer on which the .NET Framework versions 1.1 and 2.0 are installed. The application is compatible with the .NET Framework 1.1, but it is incompatible with the .NET Framework 2.0. You need to ensure that the application will use the .NET Framework version 1.1 on the new computer. What should you do?

A. Add the following XML element to the application configuration file.

```
<configuration>
<startup>
<supportedRuntime version="1.1.4322" />
<startup>
</configuration>
```

B. Add the following XML element to the application configuration file.

```
<configuration>
<runtime>
<assemblyBinding
xmlns="urn:schemas-microsoft-com:asm.v1">
<dependentAssembly>
<assemblyIdentity name="Application1"
publicKeyToken="32ab4ba45e0a69a1"
culture="neutral" />
<bindingRedirect oldVersion="1.0.3075.0"
newVersion="1.1.4322.0"/>
</dependentAssembly>
</assemblyBinding>
</runtime>
</configuration>
```

C. Add the following XML element to the machine configuration file.

```
<configuration>
<startup>
<requiredRuntime version="1.1.4322" />
<startup>
</configuration>
```

D. Add the following XML element to the machine configuration file.

```
<configuration>
<runtime>
<assemblyBinding
xmlns="urn:schemas-microsoft-com:asm.v1">
<dependentAssembly>
<assemblyIdentity name="Application1"
publicKeyToken="32ab4ba45e0a69a1"
culture="neutral" />
<bindingRedirect oldVersion="1.0.3075.0"
newVersion="1.1.4322.0"/>
</dependentAssembly>
</assemblyBinding>
</runtime>
</configuration>
```

**Answer: A**

**Question: 147**

You are creating a strong-named assembly named Company1 that will be used in multiple applications. Company1 will be rebuilt frequently during the development cycle. You need to ensure that each time the assembly is rebuilt it works correctly with each application that uses it. You need to configure the computer on which you develop Company1 such that each application uses the latest build of Company1.

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

A. Create a DEVPATH environment variable that points to the build output directory for the strong-named assembly.

B. Add the following XML element to the machine configuration file:

```
<developmentMode developerInstallation="true"/>
```

C. Add the following XML element to the machine configuration file:

```
<dependentAssembly>
<assemblyIdentity name="Company1"
 publicKeyToken="32ab4ba45e0a69a1"
 language="en-US" version="*.*.*.*" />
<publisherPolicy apply="no" />
</dependentAssembly>
```

D. Add the following XML element to the configuration file of each application that uses the strong-named assembly:

```
<supportedRuntime version="*.*.*.*" />
```

E. Add the following XML element to the configuration file of each application that uses the strong-named assembly:

```
<dependentAssembly>
<assemblyIdentity name="Company1"
 publicKeyToken="32ab4ba45e0a69a1"
 language="en-US" version="*.*.*.*" />
<bindingRedirect newVersion="*.*.*.*" />
</dependentAssembly>
```

**Answer: A, B**

### **Explanation:**

The developmentmode element in the machine configuration file tells the .net runtime to locate the assembly by using the DevPath environment variable.

The SupportedRuntime element specifies which .net runtime versions the assembly supports.

The DependentAssembly element is used to encapsulate the binding policy and assembly location for each assembly.

### **Question: 148**

You are defining a class named CompanyClass that contains several child objects.

CompanyClass contains a method named ProcessChildren that performs actions on the child objects. CompanyClass objects will be serializable.

You need to ensure that the ProcessChildren method is executed after the CompanyClass object and all its child objects are reconstructed.

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

- A. Apply the OnDeserializing attribute to the ProcessChildren method.
- B. Specify that CompanyClass implements the IDeserializationCallback interface.
- C. Specify that CompanyClass inherits from the ObjectManager class.
- D. Apply the OnSerialized attribute to the ProcessChildren method.
- E. Create a GetObjectData method that calls ProcessChildren.
- F. Create an OnDeserialization method that calls ProcessChildren.

**Answer: B, F**

**Explanation:**

The IDeserializationCallback interface allows some custom code to be called after the complete object graph has been deserialized via the onDeserialization method. In this case the ProcessChildren should be called in the onDeserialization method.

Applying OnDeserializingAttribute to the ProcessChildren method will not work because there is not guarantee that the complete object graph will have been deserialized.

If the Company class inherits from ObjectManager it will still have to implement IDeserializationCallback to perform actions after the complete object graph has been deserialized.

The OnSerialized attribute signifies that a method should be called immediately after serialization of the object.

**Question: 149**

You develop a service application that needs to be deployed. Your network administrator creates a specific user account for your service application. You need to configure your service application to run in the context of this specific user account. What should you do?

- A. Prior to installation, set the StartType property of the ServiceInstaller class.
- B. Prior to installation, set the Account, Username, and Password properties of the ServiceProcessInstaller class.
- C. Use the CONFIG option of the net.exe command-line tool to install the service.
- D. Use the installutil.exe command-line tool to install the service.

**Answer: B**

**Explanation:**

The ServiceProcessInstaller class is automatically called during installation. It is the ideal place to specify the default service settings such as account credentials.

ServiceInstaller.StartType controls how the service will start up e.g automatically or manually. It has nothing to do with a specific account.

Net.exe with the config option is used to configure the server or workstation services.

Installutil.exe can be used to install the service but it is not possible to specify or override service account credentials. They have to be specified in the ServiceProcessInstaller class.

**Question: 150****DRAG DROP**

You work as a developer at Company.com. You are developing an application to create a new file on the local file system.

You need to define specific security settings for the file. You must deny the file inheritance of any default security settings.

What should you do?

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

The FileSecurity class should be used to apply the security settings to the file. Once an instance of FileSecurity is created, FileSystemAccessRule objects should can be added to achieve the security settings. Finally the FileStream class has a constructor that takes a FileSecurity object and will create the file with the specified security settings.

The File class could have been used to apply the permissions (via SetAccessControl() ).

However this would demand an option to create the file independently of applying the security permissions that is not listed.

FileSystemAuditRule class is used to specify the conditions when access to a file\directory is audited.

**Question: 151**

You are developing a method to call a COM component. You need to use declarative security to explicitly request the runtime to perform a full stack walk. You must ensure that all callers have the required level of trust for COM interop before the callers execute your method. Which attribute should you place on the method?

- A. [SecurityPermission(SecurityAction::Demand, Flags=SecurityPermissionFlag::UnmanagedCode)]
- B. [SecurityPermission(SecurityAction::LinkDemand, Flags=SecurityPermissionFlag::UnmanagedCode)]
- C. [SecurityPermission(SecurityAction::Assert, Flags = SecurityPermissionFlag::UnmanagedCode)]
- D. [SecurityPermission(SecurityAction::Deny, Flags = SecurityPermissionFlag::UnmanagedCode)]

**Answer: A****Explanation:**

A Demand should be used on the SecurityPermission attribute with the UnmanagedCode flag to force all callers in the call stack to have permission to call unmanaged components.

LinkDemand will only force the immediate caller to have the permission.

Assert will ignore the permissions of callers and allow them indiscriminately.  
Deny will explicitly deny access if the caller has the specified permission. This is the reverse of what is required.

**Question: 152**

You work as a developer at Company.com. You create a service application that monitors free space on a hard disk drive.  
You must ensure that the service application runs in the background and monitors the free space every minute.  
What should you do?

**Answer:**

**Explanation:**

System.Timers.Timer should be added to the Service class and set with an Interval of 1 minute. The Timer should be started on the OnStart method of the service. The Elapsed event of the Timer will fire every minute an event handler can be coded to perform the monitoring of the free space on the hard disk.  
Initialisation should not be performed in the constructor because if the service is stopped and restarted, constructor may not be called and the service will not re-start correctly.  
The OnStart method is guaranteed to be called following a restart.  
Adding code to the OnStart method of the Service class to monitor free space will work once when the service is started but there will be no continual periodic monitoring as the question requests.  
The System.Windows.Forms.Timer class designed to be used on a windows forms application and not a service based application. It must be used within a window.

**Question: 153**

You are developing a custom-collection class.  
You need to create a method in your class. You need to ensure that the method you create in your class returns a type that is compatible with the Foreach statement. Which criterion should the method meet?

- A. The method must return a type of either IEnumerator or IEnumerable.
- B. The method must return a type of IComparable.
- C. The method must explicitly contain a collection.
- D. The method must be the only iterator in the class.

**Answer: A**

**Explanation:**

Returning an IEnumerator will enable the ForEach statement.  
IEnumerable is a subtype of IEnumerator hence can also be up cast to IEnumerator.  
IComparable is used to enable comparisons for a user type.  
Explicitly containing a collection within the method will have no impact on the methods return type which is what the ForEach statement will operate on.

**Question: 154**

You are developing a custom event handler to automatically print all open documents. The event handler helps specify the number of copies to be printed. You need to develop a custom event arguments class to pass as a parameter to the event handler. Which code segment should you use?

- A. 

```
public class PrintingArgs {
 private int copies;
 public PrintingArgs(int numberOfCopies) {
 this.copies = numberOfCopies;
 }
 public int Copies {
 get { return this.copies;
 }
 }
}
```
- B. 

```
public class PrintingArgs : EventArgs {
 private int copies;
 public PrintingArgs(int numberOfCopies) {
 this.copies = numberOfCopies;
 }
 public int Copies {
 get { return this.copies;
 }
 }
}
```
- C. 

```
public class PrintingArgs {
 private EventArgs eventArgs;
 public PrintingArgs(EventArgs ea) {
 this.eventArgs = ea;
 }
 public EventArgs Args {get { return eventArgs;
 }
 }
}
```
- D. 

```
public class PrintingArgs : EventArgs {
 private int copies;
}
```

**Answer: B**

**Explanation:**

The event handler will require a parameter of type EventArgs or a derived type. The derived type in this example will question states that the event handler helps specify the number of documents that require printing, this information will have to come from the derived EventArgs class in the form of an instance variable.

A & C do not derive from EventArgs hence cannot fit into the event handling model.  
D does not expose the copies instance variable.

**Question: 155**

You are testing a newly developed method named PersistToDB. This method accepts a parameter of type EventLogEntry. This method does not return a value. You need to create a code segment that helps you to test the method. The code segment must read entries from the application log of local computers and then pass the entries on to the PersistToDB method. The code block must pass only events of type Error or Warning from the source MySource to the PersistToDB method.

Which code segment should you use?

```
A. EventLog myLog = new EventLog("Application", ".");
foreach (EventLogEntry entry in myLog.Entries)
{
 if (entry.Source == "MySource")
 {
 PersisitToDB(entry);
 }
}
```

```
B. EventLog myLog = new EventLog("Application", ".");
myLog.Source = "MySource";
foreach (EventLogEntry entry in myLog.Entries)
{
 if (entry.EntryType == (EventLogEntryType.Error &
 EventLogEntryType.Warning))
 {
 PersistToDB(entry);
 }
}
```

```
C. EventLog myLog = new EventLog("Application", ".");
foreach (EventLogEntry entry in myLog.Entries)
{
 if (entry.Source == "MySource")
 {
 if (entry.EntryType == EventLogEntryType.Error ||
 entry.EntryType == EventLogEntryType.Warning)
 {
 PersistToDB(entry);
 }
 }
}
```

```
D. EventLog myLog = new EventLog("Application", ".");
myLog.Source = "MySource";
foreach (EventLogEntry entry in myLog.Entries)
{
 if (entry.EntryType == EventLogEntryType.Error ||
 entry.EntryType == EventLogEntryType.Warning)
 {
 PersistToDB(entry);
 }
}
```

}

**Answer: C**

**Explanation:**

It is necessary to create a new Application EventLog, iterate over all the EventLogEntries and call the PersistToDB method if the entry is a warning or error and the source is MySource.

A will PersistToDb irrespective of the type of log entry. The question explicitly states only warnings and errors should be persisted.

B features an incorrect test for warnings and errors.

D&B do not ensure that only MySource entries are persisted. Instead they overwrite the source.

**Question: 156**

You create an application to send a message by e-mail. An SMTP server is available on the local subnet. The SMTP server is named smtp.Company.com.

To test the application, you use a source address, me@Company.com, and a target address, you@Company.com.

You need to transmit the e-mail message. Which code segment should you use?

A. MailAddress addrFrom =  
new MailAddress("me@Company.com", "Me");  
MailAddress addrTo =  
new MailAddress("you@Company.com", "You");  
MailMessage message = new MailMessage(addrFrom, addrTo);  
message.Subject = "Greetings!";  
message.Body = "Test";  
message.Dispose();

B. string strSmtpClient = "smtp.Company.com";  
string strFrom = "me@Company.com";  
string strTo = "you@Company.com";  
string strSubject = "Greetings!";  
string strBody = "Test";  
MailMessage msg =  
new MailMessage(strFrom, strTo, strSubject, strSmtpClient);

C. MailAddress addrFrom = new MailAddress("me@Company.com");  
MailAddress addrTo = new MailAddress("you@Company.com");  
MailMessage message = new MailMessage(addrFrom, addrTo);  
message.Subject = "Greetings!";  
message.Body = "Test";  
SmtpClient client = new SmtpClient("smtp.Company.com");  
client.Send(message);

D. MailAddress addrFrom =  
new MailAddress("me@Company.com", "Me");  
MailAddress addrTo =  
new MailAddress("you@Company.com", "You");  
MailMessage message = new MailMessage(addrFrom, addrTo);  
message.Subject = "Greetings!";

```
message.Body = "Test";
SocketInformation info = new SocketInformation();
Socket client = new Socket(info);
System.Text.ASCIIEncoding enc =
new System.Text.ASCIIEncoding();
byte[] msgBytes = enc.GetBytes(message.ToString());
client.Send(msgBytes);
```

**Answer: C**

**Explanation:**

To Send a simple mail message construct a MailMessage object and a SmtpClient object. Call the SmtpClient.Send instance method supplying the MailMessage object as a parameter.

A creates a MailMessage but then destroys it.

B creates a MailMessage but then does not do anything with it.

D tries to do something with sockets, this is unnecessary because there is a SMTP server available. The question implies delivering the mail via SMTP.

**Question: 157**

You are developing an application to perform mathematical calculations. You develop a class named CalculationValues. You write a procedure named PerformCalculation that operates on an instance of the class. You need to ensure that the user interface of the application continues to respond while calculations are being performed. You need to write a code segment that calls the PerformCalculation procedure to achieve this goal.

Which code segment should you use?

```
A. private void PerformCalculation() {...} private void DoWork(){
CalculationValues myValues = new CalculationValues();
Thread newThread = new Thread(
new ThreadStart(PerformCalculation));
newThread.Start(myValues);
}
```

```
B. private void PerformCalculation() {...} private void DoWork(){
CalculationValues myValues = new CalculationValues();
ThreadStart delStart = new
ThreadStart(PerformCalculation);
Thread newThread = new Thread(delStart);
if(newThread.IsAlive) {newThread.Start(my Values);
}}
```

```
C. private void PerformCalculation (CalculationValues values) {...} private void
DoWork(){
CalculationValues myValues = new CalculationValues();
Application.DoEvents();
PerformCalculation(myValues);
Application.DoEvents();
}
```

```

D. private void PerformCalculation(object values) {...} private void DoWork(){
CalculationValues myValues = new CalculationValues();
Thread newThread = new Thread(
new ParameterizedThreadStart(PerformCalculation));
newThread.Start(myValues);
}

```

**Answer: D**

**Explanation:**

It is a requirement that the UI continues to respond, hence PerformCalculation should execute in a separate thread. PerformCalculation requires a parameter hence you should use the ParameterizedThreadStart delegate.

A& B attempt to supply a parameter to the ThreadStart delegate. This is not possible.

C Does not run in a new thread and hence may leave the UI unresponsive.

**Question: 158**

You write the following code. public delegate void FaxDocs(object sender, FaxArgs args);

You need to create an event that will invoke FaxDocs. Which code segment should you use?

```

A. public static event FaxDocs Fax;
B. public static event Fax FaxDocs;
C. public class FaxArgs : EventArgs {
private string coverPageInfo;
public FaxArgs(string coverInfo) {
this.coverPageInfo = coverPageInfo;
}
public string CoverPageInformation {
get {return this.coverPageInfo;
}
}}
D. public class FaxArgs : EventArgs {
private string coverPageInfo;
public string CoverPageInformation {
get {return this.coverPageInfo;
}
}}

```

**Answer: A**

**Explanation:**

An event is declared by using the event keyword followed by a delegate type and then a name for the event.

B fax is not a delegate type.

C&D do not declare events.

**Question: 159**

You write the following code segment to call a function from the Win32 Application Programming Interface (API) by using platform invoke.

```
string personName = "N?el";
string msg = "Welcome" + personName + "to club!";
bool rc = User32API.MessageBox(0, msg, personName, 0);
```

You need to define a method prototype that can best marshal the string data. Which code segment should you use?

```
A. [DllImport("user32", CharSet = CharSet.Ansi)]public static extern bool
MessageBox(int hWnd, String text, String caption, uint type);
}
```

```
B. [DllImport("user32", EntryPoint = "MessageBoxA", CharSet = CharSet.Ansi)]public
static extern bool MessageBox(int hWnd,
[MarshalAs(UnmanagedType.LPWStr)]String text,
[MarshalAs(UnmanagedType.LPWStr)]String caption,
uint type);
}
```

```
C. [DllImport("user32", CharSet = CharSet.Unicode)]public static extern bool
MessageBox(int hWnd, String text, String caption, uint type);
}
```

```
D. [DllImport("user32", EntryPoint = "MessageBoxA", CharSet =
CharSet.Unicode)]public static extern bool MessageBox(int hWnd,
[MarshalAs(UnmanagedType.LPWStr)]String text,
[MarshalAs(UnmanagedType.LPWStr)]String caption,
uint type);
}
```

**Answer: C**

**Question: 160**

You are writing a method to compress an array of bytes. The array is passed to the method in a parameter named document. You need to compress the incoming array of bytes and return the result as an array of bytes. Which code segment should you use?

```
A. MemoryStream strm = new MemoryStream(document);
DeflateStream deflate = new DeflateStream(strm,
CompressionMode.Compress);
byte[] result = new byte[document.Length];
deflate.Write(result, 0, result.Length);
return result;
```

```
B. MemoryStream strm = new MemoStream(document);
DeflateStream deflate = new DeflateStream(strm,
CompressionMode.Compress);
deflate.Write(document, 0, document.Length);
deflate.Close();
```

```

return strm.ToArray();
C. MemoryStream strm = new MemoryStream();
DeflateStream deflate = new DeflateStream(strm,
CompressionMode .Compress);
deflate.Write(document, 0, document.Length);
deflate.Close();
return strm.ToArray(),
D. MemoryStream inStream = new MemoryStream(document);
DeflateStream deflate = new DeflateStream(inStream,
CompressionMode.Compress);
MemoryStream outStream = new MemoryStream();
int b;
while ((b = deflate.ReadByte()) != -1) {
outStream.WriteByte((byte)b);
} return outStream.ToArray();

```

**Answer: C**

**Explanation:**

The document is compressed and written to a new MemoryStream using the Deflate class. Finally the compressed data can be returned as an array of bytes using the ToArray method of the MemoryStream.

A does not compress and write the document, instead it is compressing and writing an empty array

B & D are reading and writing to the same document.

**Question: 161**

You are writing an application that uses SOAP to exchange data with other applications.

You use a Department class that inherits from ArrayList to send objects to another application. The Department object is named dept.

You need to ensure that the application serializes the Department object for transport by using SOAP. Which code should you use?

```

A. SoapFormatter formatter = new SoapFormatter();
byte[] buffer = new byte[dept.Capacity];
MemoryStream stream = new MemoryStream(buffer);
foreach (object o in dept) {
formatter.Serialize(stream, o);
}
B. SoapFormatter formatter = new SoapFormatter();
byte[] buffer = new byte[dept.Capacity];
MemoryStream stream = new MemoryStream(buffer);
formatter.Serialize(stream, dept);
C. SoapFormatter formatter = new SoapFormatter();
MemoryStream stream = new MemoryStream();
foreach (object o in dept) {

```

```
formatter.Serialize(stream, o);
}
D. SoapFormatter formatter = new SoapFormatter();
MemoryStream stream = new MemoryStream();
formatter.Serialize(stream, dept);
```

**Answer: D**

**Explanation:**

Simply serialize the entire object to a stream using a SoapFormatter.  
A&C attempt to serialize components of the object rather the object itself.  
B attempts to serialize to an array, however the array will not be big enough to store the serialized object because it is not sized on the entire object.

**Question: 162**

You need to create a class definition that is interoperable along with COM. You need to ensure that COM applications can create instances of the class and can call the GetAddress method. Which code segment should you use?

```
A. public class Customer {
 string addressString;
 public Customer(string address) { addressString = address;
 }
 public string GetAddress() { return addressString;
 }}
B. public class Customer {
 static string addressString;
 public Customer() { }
 public static string GetAddress() { return addressString;
 }}
C. public class Customer {
 string addressString;
 public Customer() { }
 public string GetAddress() { return addressString;
 }}
D. public class Customer {
 string addressString;
 public Customer() { }
 internal string GetAddress() { return addressString;
 }}
```

**Answer: C**

**Explanation:**

The class should be declared with a parameter less constructor and the getAddress() method should be public.

A uses a constructor with Parameters.  
B uses static members that are not supported in COM  
D the method GetAddress() must be public to be accessible by COM.

**Question: 163**

You are developing a class library. Portions of your code need to access system environment variables.

You need to force a runtime SecurityException only when callers that are higher in the call stack do not have the necessary permissions.

Which call method should you use?

- A. set.Demand();
- B. set.Assert();
- C. set.PermitOnly();
- D. set.Deny();

**Answer: A**

**Explanation:**

Demand forces all callers in the call stack to have the specified permission.

PermitOnly will instruct the runtime to reduce the access by only allowing callers with the permissions explicitly stated and nothing else.

Assert will ignore the permissions of callers and allow them indiscriminately.

Deny will explicitly deny access if the caller has the specified permission.

**Question: 164**

You are developing a method to hash data with the Secure Hash Algorithm. The data is passed to your method as a byte array named message. You need to compute the hash of the incoming parameter by using SHA1. You also need to place the result into a byte array named hash. Which code segment should you use?

- A. SHA1 sha = new SHA1CryptoServiceProvider();  
byte[] hash = null;  
sha.TransformBlock(  
message, 0, message.Length, hash, 0);
- B. SHA1 sha = new SHA1CryptoServiceProvider();  
byte[] hash = BitConverter.GetBytes(sha.GetHashCode());
- C. SHA1 sha = new SHA1CryptoServiceProvider();  
byte[] hash = sha.ComputeHash(message);
- D. SHA1 sha = new SHA1CryptoServiceProvider();  
sha.GetHashCode();  
byte[] hash = sha.Hash;

**Answer: C**

**Explanation:**

Initialise SHA1 object and call the ComputeHash method supplying the message as a parameter to return the hash code as an array of bytes.

A TransferBlock is more appropriate for hashing part of a message. Also it should be called with TransferEndBlock.

B&C GetHashCode is the method inherited from the Object class. It will not perform a hash on the incoming message.

**Question: 165**

You are developing a method to hash data for later verification by using the MD5 algorithm. The data is passed to your method as a byte array named message. You need to compute the hash of the incoming parameter by using MD5. You also need to place the result into a byte array. Which code segment should you use?

- A. `HashAlgorithm algo = HashAlgorithm.Create("MD5");  
byte[] hash = algo.ComputeHash(message);`
- B. `HashAlgorithm algo = HashAlgorithm.Create( "MD5");  
byte[] hash = BitConverter.GetBytes(algo.GetHashCode());`
- C. `HashAlgorithm algo;  
algo = HashAlgorithrn.Crcate(messagc.ToString());  
byte[] hash = algo.Hash;`
- D. `HashAlgorithm algo = HashAlgorithm.Create("MD5");  
byte[] hash = null;  
algo.TransformBlock(message, 0, message.Length, hash, 0);`

**Answer: A**

**Explanation:**

Create a HashAlgorithm object based on the MD5 algorithm and call the ComputerHash method that will return the hash as an array of bytes.

B GetHashCode() will call the method inherited from object, it will not hash the message.

C The parameter of the Create method should specify the type of hashing algorithm to use not the message to be hashed.

D TransferBlock is more appropriate for hashing part of a message. Also it should be called with TransferEndBlock.

**Question: 166**

You need to create a dynamic assembly named MyAssembly. You also need to save the assembly to disk. Which code segment should you use?

- A. `AssemblyName myAssemblyName =  
new AssemblyName();  
myAssemblyName.Name = "MyAssembly";  
AssemblyBuilder myAssemblyBuilder =  
AppDomain.CurrentDomain.DefineDynamicAssembly  
(myAssemblyName, AssemblyBuilderAccess.Run);  
myAssemblyBuilder.Save("MyAssembly.dll");`

```

B. AssemblyName myAssemblyName =
new AssemblyName();
myAssemblyName.Name = "MyAssembly";
AssemblyBuilder myAssemblyBuilder =
AppDomain.CurrentDomain.DefineDynamicAssembly
(myAssemblyName, AssemblyBuilderAccess.Save);
myAssemblyBuilder.Save("MyAssembly.dll");
C. AssemblyName myAssemblyName =
new AssemblyName();
AssemblyBuilder myAssemblyBuilder =
AppDomain.CurrentDomain.DefineDynamicAssembly
(myAssemblyName, AssemblyBuilderAccess.RunAndSave);
myAssemblyBuilder.Save("MyAssembly.dll");
D. AssemblyName myAssemblyName =
new AssemblyName("MyAssembly");
AssemblyBuilder myAssemblyBuilder =
AppDomain.CurrentDomain.DefineDynamicAssembly
(myAssemblyName, AssemblyBuilderAccess.Save);
myAssemblyBuilder.Save("c:\\MyAssembly.dll");

```

**Answer: B**

**Explanation:**

Create an AssemblyName object and use it to construct an AssemblyBuilder with save privilege. Finally call the Save method on the AssemblyBuilder to write the assembly to disk.

A Creates an assembly that does not have the privilege to save to disk.

C does not provide a name the assembly

D attempts to define a physical file location, this is not compatible with AssemblyBuilder.Save

**Question: 167**

You are writing code for user authentication and authorization. The username, password, and roles are stored in your application data store.

You need to establish a user security context that will be used for authorization checks such as IsInRole. You write the following code segment to authorize the user.

```

if (!TestPassword(userName, password))
throw new Exception("could not authenticate user");
String[] userRolesArray = LookupUserRoles(userName);

```

You need to complete this code so that it establishes the user security context. Which code segment should you use?

```

A. GenericIdentity ident = new GenericIdentity(userName);
GenericPrincipal currentUser =
new GenericPrincipal(ident, userRolesArray);
Thread.CurrentPrincipal = currentUser;
B. WindowsIdentity ident = new WindowsIdentity(userName);

```

```
WindowsPrincipal currentUser = new WindowsPrincipal(ident);
Thread.CurrentPrincipal = currentUser;
C. NTAccount userNTName = new NTAccount(userName);
GenericIdentity ident = new GenericIdentity(userNTName.Value);
GenericPrincipal currentUser = new GenericPrincipal(ident, userRolesArray);
Thread.CurrentPrincipal = currentUser;
D. IntPtr token = IntPtr.Zero;
token = LogonUserUsingInterop(userName, encryptedPassword);
WindowsImpersonationContext ctx =
WindowsIdentity.Impersonate(token);
```

**Answer: A**

**Explanation:**

Because the application storing the credentials, the GenericIdentity & GenericPrincipal classes should be used instead of the WindowsIdentity\Principal classes.

B uses WindowsIdentity & WindowsPrincipal

C incorrectly uses NTAccount to initialise a GenericPrincipal. GenericPrincipal requires an implementation of IIdentity.

D the WindowsIdentity.Impersonate() is used for running code in the context of another user.

Impersonation is not what is required.

**Question: 168**

You are developing an application for a client residing in Hong Kong.

You need to display negative currency values by using a minus sign. Which code segment should you use?

```
A. NumberFormatInfo culture =
new CultureInfo("zh-HK").NumberFormat;
culture.NumberNegativePattern = 1;
return numberToPrint.ToString("C", culture);
B. NumberFormatInfo culture =
new CultureInfo("zh-HK").NumberFormat;
culture.CurrencyNegativePattern = 1;
return numberToPrint.ToString("C", culture);
C. CultureInfo culture =
new CultureInfo("zh-HK");
return numberToPrint.ToString("-(0)", culture);
D. CultureInfo culture =
new CultureInfo("zh-HK");
return numberToPrint.ToString("()", culture);
```

**Answer: B**

**Explanation:**

Use CurrencyNegativePattern property set to 1 to display negative currency values with a minus sign.

A will give a minus sign for negative numbers but not for negative currencies.

C & D The culture has not been to display a minus sign for currency.

**Question: 169**

You need to write a code segment that will create a common language runtime (CLR) unit of isolation within an application. Which code segment should you use?

A. AppDomainSetup mySetup = AppDomain.CurrentDomain.SetupInformation;  
mySetup.ShadowCopyFiles = "true";  
B. System.Diagnostics.Process myProcess;  
my Process = new System.Diagnostics.Process();

C. AppDomain domain;  
domain = AppDomain.CreateDomain("CompanyDomain");  
D. System.ComponentModel .Component myComponent;  
myComponent = new System.ComponentModel.Component();

**Answer: C**

**Explanation:**

Create a new ApplicationDomain using the AppDomain.CreateDomain() method.

A ShadowCopyFiles property of AppDomainSetup controls whether shadow copying is enabled or disabled.

B the Process class is used to represent an existing process running on a computer.

D The ComponentModel.Component class is used for sharing components between applications.

**Question: 170**

You are developing an application that dynamically loads assemblies from an application directory.

You need to write a code segment that loads an assembly named Company1.dll into the current application domain. Which code segment should you use?

A. AppDomain domain = AppDomain.CurrentDomain;  
string myPath = Path.Combine(domain.BaseDirectory, "Company1.dll");  
Assembly asm = Assembly.LoadFrom(myPath);  
B. AppDomain domain = AppDomain.CurrentDomain;  
string myPath = Path.Combine(domain.BaseDirectory, "Company1.dll");  
Assembly asm = Assembly.Load(myPath);  
C. AppDomain domain = AppDomain.CurrentDomain;  
string myPath = Path.Combine(domain.DynamicDirectory, "Company1.dll");  
Assembly asm = AppDomain.CurrentDomain.Load(myPath);  
D. AppDomain domain = AppDomain.CurrentDomain;  
Assembly asm = domain.GetData("Company1.dll");

**Answer: A**

**Explanation:**

The Assembly.LoadFrom() method can be called to dynamically load an assembly from file.

B the Load method requires an AssemblyName object as a parameter.  
C it is not possible to use AppDomain.Load to load an assembly from file.  
D AppDomain.GetData gets information stored in the AppDomain for the specified assembly. It cannot load an assembly.

**Question: 171**

You need to return the contents of an isolated storage file as a string. The file is machine-scoped and is named Settings.dat. Which code segment should you use?

A. IsolatedStorageFileStream isoStream;  
isoStream = new IsolatedStorageFileStream( "Settings.dat", FileMode.Open);  
string result = new StreamReader(isoStream).ReadToEnd();  
B. IsolatedStorageFile isoFile;  
isoFile = IsolatedStorageFile.GetMachineStoreForAssembly();  
IsolatedStorageFileStream isoStream;  
isoStream = new IsolatedStorageFileStream("Settings.dat", FileMode.Open, isoFile);  
string result = new StreamReader(isoStream).ReadToEnd();  
C. IsolatedStorageFileStream isoStream;  
isoStream = new IsolatedStorageFileStream("Settings.dat", FileMode.Open);  
string result = isoStream.ToString();  
D. IsolatedStorageFile isoFile;  
isoFile = IsolatedStorageFile.GetMachineStoreForAssembly();  
IsolatedStorageFileStream isoStream;  
isoStream = new IsolatedStorageFileStream("Settings.dat", FileMode.Open, isoFile);  
string result = isoStream.ToString();

**Answer: B**

**Explanation:**

Retrieve the IsolatedStorageFile for the machine store. Use an IsolatedStorageFileStream to read from the desired file within the machine store.

A & C do not get the IsolatedStorageFile for the machine context.

D returns a string representation of the IsolatedStorageFileStream object not a String of the files contents as the question requests.

**Question: 172**

You are creating a class that performs complex financial calculations. The class contains a method named GetCurrentRate that retrieves the current interest rate and a variable named currRate that stores the current interest rate.

You write serialized representations of the class.

You need to write a code segment that updates the currRate variable with the current interest rate when an instance of the class is deserialized. Which code segment should you use?

A. [OnSerializing]internal void UpdateValue (StreamingContext context) {  
currRate = GetCurrentRate();  
}  
B. [OnSerializing]internal void UpdateValue(SerializationInfo info) {

```

info.AddValue("currentRate", GetCurrentRate());
}
C. [OnDeserializing]internal void UpdateValue(SerializationInfo info) {
Info.AddValue("currentRate", GetCurrentRate());
}
D. [OnDeserialized]internal void UpdateValue(StreamingContext context) {
currRate = GetCurrentRate();
}

```

**Answer: D**

**Explanation:**

A method with the OnDeserialized attribute will be called after Deserialization and any instance variables can be set.

A & B the method will fire during serializing, the question is concerned with reconstructing the object during deserialization.

C the OnDeserializing attribute is useful for default values. OnDeserializing attribute works with a method that contains a StreamContext parameter and not a SerializationInfo parameter.

**Question: 173**

You need to create a method to clear a Queue named q. Which code segment should you use?

```

A. foreach (object e in q) {
q.Dequeue();
}

```

```

B. foreach (object e in q) {
Enqueue(null);
}

```

```

C. q.Clear();
D. q.Dequeue();

```

**Answer: C**

**Explanation:**

Simply call the Clear() method to empty a queue.

A Dequeueing all of the items in a queue will also serve the same affect but it is a lot more roundabout.

B attempts to re-queue items that are already in the queue

D will de-queue only one item that is at the front of the queue.

**Question: 174**

You are writing an application that uses isolated storage to store user preferences. The application uses multiple assemblies. Multiple users will use this application on the same computer. You need to create a directory named Preferences in the isolated storage area that is scoped to the current Microsoft Windows identity and assembly.

Which code segment should you use?

- A. IsolatedStorageFile store;  
store = IsolatedStorageFile.GetUserStoreforAssembly();  
store.CreateDirectory("Preferences");
- B. IsolatedStorageFile store;  
store = IsolatedStorageFile.GetMachineStoreForAssembly();  
store.CreateDirectory("Preferences");
- C. IsolatedStorageFile store;  
store = IsolatedStorageFile.GetUserStoreForDomain();  
store.CreateDirectory("Preferences");
- D. IsolatedStorageFile store;  
store = IsolatedStorageFile.GetMachineStoreForApplication();  
store.CreateDirectory("Preferences");

**Answer: A**

**Explanation:**

The user store for the assembly is the correct store that is required. It is returned by IsolatedStorageFile.GetUserStoreForAssembly().

B,C & D return Isolated Storage File stores of incorrect scope

**Question: 175**

You are loading a new assembly into an application. You need to override the default evidence for the assembly. You require the common language runtime (CLR) to grant the assembly a permission set, as if the assembly were loaded from the local intranet zone.

You need to build the evidence collection. Which code segment should you use?

- A. Evidence evidence = new Evidence(Assembly.GetExecutingAssembly().Evidence);
- B. Evidence evidence = new Evidence();  
evidence.AddAssembly(new Zone(SecurityZone.Intranet));
- C. Evidence evidence = new Evidence();  
evidence.AddHost(new Zone(SecurityZone.Intranet));
- D. Evidence evidence = new Evidence(AppDomain.CurrentDomain.Evidence);

**Answer: C**

**Explanation:**

Use the evidence.AddHost method to add Zone evidence.

A simply gets the evidence of the Executing Assembly and assigns it to a new object, the question explicitly wants Intranet zone evidence.

B Adds assembly evidence, the question asks for host evidence because it is concerned with

where the assembly was loaded from.  
D does not create an Evidence object with Intranet zone evidence.

**Question: 176**

You are developing a class library that will open the network socket connections to computers on the network. You will deploy the class library to the global assembly cache and grant it full trust. You write the following code to ensure usage of the socket connections.

```
SocketPermission permission =
new SocketPermission(PermissionState.Unrestricted);
permission.Assert();
```

Some of the applications that use the class library might not have the necessary permissions to open the network socket connections. You need to cancel the assertion. Which code segment should you use?

- A. `CodeAccessPermission.RevertAssert();`
- B. `CodeAccessPermission.RevertDeny();`
- C. `permission.Deny();`
- D. `permission.PermitsOnly();`

**Answer: A**

**Explanation:**

`CodeAccessPermission.RevertAssert()` should be used to undo a previous `Assert` call.  
B is used to revert a previous deny call.  
C & D are used to reduce the CAS permissions, they do not undo a previous `Assert` call.

**Question: 177**

You develop a service application named `FileService`. You deploy the service application to multiple servers on your network. You implement the following code segment. (Line numbers are included for reference only.)

```
01 public void StartService(string serverName){
02 ServiceController ctrl = new
03 ServiceController("FileService");
04 if (ctrl.Status == ServiceControllerStatus.Stopped){
05 }
06 }
```

You need to develop a routine that will start `FileService` if it stops. The routine must start `FileService` on the server identified by the `serverName` input parameter. Which two lines of code should you add to the code segment? (Each correct answer presents part of the solution. Choose two.)

- A. Insert the following line of code between lines 03 and 04: `ctrl.ServiceName = serverName;`
- B. Insert the following line of code between lines 03 and 04: `ctrl.MachineName = serverName;`

- C. Insert the following line of code between lines 03 and 04: `crtl.Site.Name = serverName;`
- D. Insert the following line of code between lines 04 and 05: `crtl.Continue();`
- E. Insert the following line of code between lines 04 and 05: `crtl.Start();`
- F. Insert the following line of code between lines 04 and 05: `crtl.ExecuteCommand(0);`

**Answer: B, E**

**Explanation:**

The ServiceController is capable of controller services on other computers, the MachineName should be specified. The service should be started with the Start() method if it is in the stopped state.

Setting the ServiceName to the machine name is incorrect.

No such property as SiteName

Continue cannot re-start a stopped service only a paused one.

ExecuteCommand is used to fire a custom command on the service.

**Question: 178**

You need to read the entire contents of a file named Message.txt into a single string variable. Which code segment should you use?

- A. 

```
string result = null;
StreamReader reader = new StreamReader("Message.txt");
result = reader.Read().ToString();
```
- B. 

```
string result = null;
StreamReader reader = new StreamReader("Message.txt");
result = reader.ReadToEnd();
```
- C. 

```
string result = string.Empty;
StreamReader reader = new StreamReader("Message.txt");
while (!reader.EndOfStream) {
 result += reader.ToString();
}
```
- D. 

```
string result = null;
StreamReader reader = new StreamReader("Message.txt");
result = reader.ReadLine();
```

**Answer: B**

**Explanation:**

Create a StreamReader based on the file and call the ReadToEnd() method to quickly read the entire file and return a string.

A & D does not read the entire file.

C calling ToString() on the reader will give a string representation of the stream and will not read from the stream.

**Question: 179**

You create a method that runs by using the credentials of the end user. You need to use Microsoft Windows groups to authorize the user. You must add a code segment that identifies whether a user is in the local group named Clerk.

Which code segment should you use?

- A. `WindowsIdentity currentUser = WindowsIdentity.GetCurrent();  
foreach (IdentityReference grp in currentUser.Groups) {  
NTAccount grpAccount =  
((NTAccount)grp.Translate(typeof(NTAccount)));  
isAuthorized = grpAccount.Value.Equals(Environment.MachineName + @"\Clerk");  
if (isAuthorized) break;  
}`
- B. `WindowsPrincipal currentUser =  
(WindowsPrincipal)Thread.CurrentPrincipal;  
isAuthorized = currentUser.IsInRole("Clerk");`
- C. `GenericPrincipal currentUser =  
(GenericPrincipal)Thread.CurrentPrincipal;  
isAuthorized = currentUser.IsInRole("Clerk");`
- D. `WindowsPrincipal currentUser =  
(WindowsPrincipal)Thread.CurrentPrincipal;  
isAuthorized = currentUser.IsInRole(Environment.MachineName);`

**Answer: B**

**Explanation:**

To check the role membership of the current windows user, use the `IsInRole()` method of the `WindowsPrincipal` in the current thread.

A it is a lot more complicated to iterate through all the groups the user belongs to and checking for matches. The `Principal` classes are for this very purposes and should be used.

C uses `GenericPrincipal`. `WindowsPrincipal` should be used for windows accounts. There is an invalid cast from `WindowsPrincipal` to `GenericPrincipal`.

D does not specify the group correctly.

**Question: 180**

You need to write a code segment that performs the following tasks: ?

Retrieves the name of each paused service. ?

Passes the name to the `Add` method of `Collection1`. Which code segment should you use?

- A. `ManagementObjectSearcher searcher =  
new ManagementObjectSearcher(  
"Select * from Win32_Service where State = 'Paused'");  
foreach (ManagementObject svc in searcher.Get()) {  
Collection1.Add(svc["DisplayName"]);  
}`
- B. `ManagementObjectSearcher searcher =`

```

new ManagementObjectSearcher("Select * from Win32_Service", "State = 'Paused'");
foreach (ManagementObject svc in searcher.Get()) {
Collection1.Add(svc["DisplayName"]);
}
C. ManagementObjectSearcher searcher =
new ManagementObjectSearcher(
"Select * from Win32_Service");
foreach (ManagementObject svc in searcher.Get()) {
if ((string) svc["State"] == "Paused") {
Collection1.Add(svc["DisplayName"]);
}}
D. ManagementObjectSearcher searcher =
new ManagementObjectSearcher();
searcher.Scope = new ManagementScope("Win32_Service");
foreach (ManagementObject svc in searcher.Get()) {
if ((string)svc["State"] == "Paused") {
Collection1.Add(svc["DisplayName"]);
}}

```

**Answer: A**

**Explanation:**

Use the ManagementObjectSearcher to search for all services with a paused state. Iterate over the returned collection and add the display name to Collection1.

B The constructor is invoked incorrectly.

C & D the query is incorrect. The searcher does not restrict to paused services.

**Question: 181**

You need to write a code segment that transfers the first 80 bytes from a stream variable named stream1 into a new byte array named byteArray. You also need to ensure that the code segment assigns the number of bytes that are transferred to an integer variable named bytesTransferred. Which code segment should you use?

A. bytesTransferred = stream1.Read(byteArray, 0, 80);

B. for (int i = 0;

i < 80;

i++) {

stream1.WriteByte(byteArray[i]);

bytesTransferred = i;

if (!stream1.CanWrite) {

break;

}}

C. while (bytesTransferred < 80) {

stream1.Seek(1, SeekOrigin.Current);

byteArray[bytesTransferred++] =

Convert.ToByte(stream1.ReadByte());

```
}
D. stream1.Write(byteArray, 0, 80);
bytesTranferred = byteArray.Lenth;
```

**Answer: A**

**Explanation:**

The Read() method accepts a byte array and the start position and number of bytes to read as parameters.

B & D The question indicates that data should be read from the stream not written to it.

C it is unnecessary to attempt to read byte by byte, the Read() method provides a very efficient way of reading into a byte array.

**Question: 182**

You create an application that stores information about your customers who reside in various regions. You are developing internal utilities for this application.

You need to gather regional information about your customers in Canada.

Which code segment should you use?

```
A. foreach (CultureInfo culture in CultureInfo.GetCultures(CultureTypes.SpecificCultures)) { //
Output the region information...}
B. CultureInfo cultureInfo = new CultureInfo("CA");
// Output the region information...
C. RegionInfo regionInfo = new RegionInfo("CA");
// Output the region information...
D. RegionInfo regionInfo = new RegionInfo("");
if (regionInfo.Name == "CA") {
// Output the region information...}
```

**Answer: C**

**Explanation:**

The RegionInfo class can be used to get information about a region.

A & B CultureInfo is used to control formatting, sorting & comparing of culture sensitive data. E.g currencies, calendar dates etc.

D Does not initialise the RegionInfo object correctly i.e to Canada.

**Question: 183**

You are developing a server application that will transmit sensitive information on a network. You create an X509Certificate object named certificate and a TcpClient object named client.

You need to create an SslStream to communicate by using the Transport Layer Security 1.0 protocol. Which code segment should you use?

```
A. SslStream ssl = new SslStream(client.GetStream());
ssl.AuthenticateAsServer(
certificate, false, SslProtocols.None, ture);
```

B. `SslStream ssl = new SslStream(client.GetStream());  
ssl.AuthenticateAsServer(  
certificate, false, SslProtocols.Ssl3, true);`  
C. `SslStream ssl = new SslStream(client.GetStream());  
ssl.AuthenticateAsServer(  
certificate, false, SslProtocols.Ssl2, true);`  
D. `SslStream ssl = new SslStream(client.GetStream());  
ssl.AuthenticateAsServer(  
certificate, false, SslProtocols.Tls, true);`

**Answer: D**

**Question: 184**

You are writing a method that accepts a string parameter named `message`.  
Your method must break the message parameter into individual lines of text and pass each line to a second method named `Process`.  
Which code segment should you use?

A. `StringReader reader = new StringReader(message);  
Process(reader.ReadToEnd());  
reader.Close();`  
B. `StringReader reader = new StringReader(message);  
while (reader.Peek() != -1) {  
string line = reader.Read().ToString();  
Process(line);  
} reader.Close();`  
C. `StringReader reader = new StringReader(message);  
Process(reader.ToString());  
reader.Close();`  
D. `StringReader reader = new StringReader(message);  
while (reader.Peek() != -1) {  
Process(reader.ReadLine());  
} reader.Close();`

**Answer: D**

**Explanation:**

`StringReader.ReadLine()` allows for lines to be read line by line.  
A `ReadToEnd()` will read the entire stream.  
B `Read()` will not read the line but only the next character.  
C will not read from the message but will just give a string representation of the reader.

**Question: 185**

You are developing a method to encrypt sensitive data with the Data Encryption Standard (DES) algorithm. Your method accepts the following parameters:  
The byte array to be encrypted, which is named `message`  
An encryption key, which is named

keyAn initialization vector, which is named iv

You need to encrypt the data. You also need to write the encrypted data to a MemoryStream object.

Which code segment should you use?

A. DES des = new DESCryptoServiceProvider();  
des.BlockSize = message.Length;  
ICryptoTransform crypto = des.CreateEncryptor(key, iv);  
MemoryStream cipherStream = new MemoryStream();  
CryptoStream cryptoStream = new CryptoStream(cipherStream, crypto, CryptoStreamMode.Write);  
cryptoStream.Write(message, 0, message.Length);

B. DES des = new DESCryptoServiceProvider();  
ICryptoTransform crypto = des.CreateDecryptor(key, iv);  
MemoryStream cipherStream = new MemoryStream();  
CryptoStream cryptoStream = new CryptoStream(cipherStream, crypto, CryptoStreamMode.Write);  
cryptoStream.Write(message, 0, message.Length);

C. DES des = new DESCryptoServiceProvider();  
ICryptoTransform crypto = des.CreateEncryptor();  
MemoryStream cipherStream = new MemoryStream();  
CryptoStream cryptoStream = new CryptoStream(cipherStream, crypto, CryptoStreamMode.Write);  
cryptoStream.Write(message, 0, message.Length);

D. DES des = new DESCryptoServiceProvider();  
ICryptoTransform crypto = des.CreateEncryptor(key, iv);  
MemoryStream cipherStream = new MemoryStream();  
CryptoStream cryptoStream = new CryptoStream(cipherStream, crypto, CryptoStreamMode.Write);  
cryptoStream.Write(message, 0, message.Length);

**Answer: D**

**Explanation:**

Use the DesCryptoServiceProvider to create a new encryptor. Create a CryptoStream that encrypt directly to the MemoryStream and call the Write() method to perform the encryption.

A Uses a blocksize set to size of the entire message

B creates a decryptor instead of an encryptor.

C does not initialise the encryptor with the key and iv correctly.

**Question: 186**

You are creating a new security policy for an application domain. You write the following lines of code.

```
PolicyLevel policy = PolicyLevel.CreateAppDomainLevel();
PolicyStatement noTrustStatement =
new PolicyStatement(
```

```
policy.GetNamedPermissionSet("Nothing"));
```

```
PolicyStatement fullTrustStatement =
```

```
new PolicyStatement(
```

```
policy.GetNamedPermissionSet("FullTrust"));
```

You need to arrange code groups for the policy so that loaded assemblies default to the Nothing permission set. If the assembly originates from a trusted zone, the security policy must grant the assembly the FullTrust permission set. Which code segment should you use?

A. CodeGroup group1 = new FirstMatchCodeGroup(  
new ZoneMembershipCondition(SecurityZone.Trusted),  
fullTrustStatement);

CodeGroup group2 = new UnionCodeGroup(  
new AllMembershipCondition(),  
noTrustStatement);

group1.AddChild(group2);

B. CodeGroup group1 = new FirstMatchCodeGroup(  
new AllMembershipCondition(),  
noTrustStatement);

CodeGroup group2 = new UnionCodeGroup(  
new ZoneMembershipCondition(SecurityZone.Trusted),  
fullTrustStatement);

group1.AddChild(group2);

C. CodeGroup group = new UnionCodeGroup(  
new ZoneMembershipCondition(SecurityZone.Trusted),  
fullTrustStatement);

D. CodeGroup group = new FirstMatchCodeGroup(  
new AllMembershipCondition(),  
noTrustStatement);

**Answer: B**

**Question: 187**

You need to write a code segment that transfers the contents of a byte array named dataToSend by using a NetworkStream object named netStream. You need to use a cache of size 8,192 bytes. Which code segment should you use?

A. MemoryStream memStream = new MemoryStream(8192);  
memStream.Write(dataToSend, 0, (int) netStream.Length);

B. MemoryStream memStream = new MemoryStream(8192);  
netStream.Write(dataToSend, 0, (int) memStream.Length);

C. BufferedStream bufStream = new BufferedStream(netStream, 8192);  
bufStream.Write(dataToSend, 0, dataToSend.Length);

D. BufferedStream bufStream = new BufferedStream(netStream);  
bufStream.Write(dataToSend, 0, 8192);

**Answer: C**

**Explanation:**

To send data using a cache it is necessary to use a BufferedStream.

The BufferedStream should be created with the cache size of 8192 bytes.

A & B do not employ caching.

D does not correctly initialise the BufferedStream to have a cache size of 8192 bytes.

**Question: 188**

You are developing a utility screen for a new client application. The utility screen displays a thermometer that conveys the current status of processes being carried out by the application.

You need to draw a rectangle on the screen to serve as the background of the thermometer as shown in the exhibit. The rectangle must be filled with gradient shading.

Which code segment should you choose?

Exhibit:



A. Rectangle rectangle = new Rectangle(10, 10, 450, 25);

LinearGradientBrush rectangleBrush =

new LinearGradientBrush(rectangle, Color.AliceBlue,

Color.CornflowerBlue,

LinearGradientMode.ForwardDiagonal);

Pen rectanglePen = new Pen(rectangleBrush);

Graphics g = this.CreateGraphics();

g.DrawRectangle(rectanglePen, rectangle);

B. Rectangle rectangle = new Rectangle(10, 10, 450, 25);

LinearGradientBrush rectangleBrush =

new LinearGradientBrush(rectangle, Color.AliceBlue,

Color.CornflowerBlue,

LinearGradientMode.ForwardDiagonal);

Pen rectanglePen = new Pen(rectangleBrush);

Graphics g = this.CreateGraphics();

g.FillRectangle(rectangleBrush, rectangle);

C. RectangleF rectangle = new RectangleF(10f, 10f, 450f, 25f);

Point[] points = new Point[] {new Point(0, 0),

new Point(110, 145)};

LinearGradientBrush rectangleBrush =

new LinearGradientBrush(rectangle, Color.AliceBlue,

Color.CornflowerBlue,

LinearGradientMode.ForwardDiagonal);

Pen rectanglePen = new Pen(rectangleBrush);

Graphics g = this.CreateGraphics();

g.DrawPolygon(rectanglePen, points);

D. RectangleF rectangle = new RectangleF(10f, 10f, 450f, 25f);

SolidBrush rectangleBrush =

new SolidBrush(Color.AliceBlue);

```
Pen rectanglePen = new Pen(rectangleBrush);
Graphics g = this.CreateGraphics();
g.DrawRectangle(rectangleBrush, rectangle);
```

**Answer: B**

**Explanation:**

Create a LinearGradientBrush and supply to the FillRectangle() method of the graphics object.

A DrawRectangle() will draw the outline of a rectangle without filling it.

C draws an unfilled Polygon..

D Uses a SolidBrush and will not achieve the desired gradient fill

**Question: 189**

You are developing a method that searches a string for a substring. The method will be localized to Italy.

Your method accepts the following parameters: The string to be searched, which is named searchListThe string for which to search, which is named searchValue You need to write the code. Which code segment should you use?

A. return searchList.IndexOf(searchValue);

B. CompareInfo comparer =  
new CultureInfo("it-IT").CompareInfo;  
return comparer.Compare(searchList, searchValue);

C. CultureInfo comparer = new CultureInfo("it-IT");  
if (searchList.IndexOf(searchValue)  
> 0) {

return true;

} else {  
return false;  
}

D. CompareInfo comparer =  
new CultureInfo("it-IT").CompareInfo;  
if (comparer.IndexOf(searchList,  
searchValue) > 0) {

return true;

} else {  
return false;  
}

**Answer: D**

**Question: 190**

You are developing a method to decrypt data that was encrypted with the Triple DES Algorithm.

The method accepts the following parameters: The byte array to be decrypted, which is named cipherMessageThe key, which is named key An initialization vector, which is named iv You need to decrypt the message by using the TripleDES class and place the result in a string.

Which code segment should you use?

A. TripleDES des = new TripleDESCryptoServiceProvider();  
des.BlockSize = cipherMessage.Length;  
ICryptoTransform crypto = des.CreateDecryptor(key, iv);  
MemoryStream cipherStream = new MemoryStream(cipherMessage);  
CryptoStream cryptoStream =  
new CryptoStream(  
cipherStream, crypto, CryptoStreamMode.Read);  
string message;  
message = new StreamReader(cryptoStream).ReadToEnd();

B. TripleDES des = new TripleDESCryptoServiceProvider();  
des.FeedbackSize = cipherMessage.Length;  
ICryptoTransform crypto = des.CreateDecryptor(key, iv);  
MemoryStream cipherStream = new MemoryStream(cipherMessage);  
CryptoStream cryptoStream =  
new CryptoStream(  
cipherStream, crypto, CryptoStreamMode.Read);  
string message;  
message = new StreamReader(cryptoStream).ReadToEnd();

C. TripleDES des = new TripleDESCryptoServiceProvider();  
ICryptoTransform crypto = des.CreateDecryptor();  
MemoryStream cipherStream = new MemoryStream(cipherMessage);  
CryptoStream cryptoStream =  
new CryptoStream(  
cipherStream, crypto, CryptoStreamMode.Read);  
string message;  
message = new StreamReader(cryptoStream).ReadToEnd();

D. TripleDES des = new TripleDESCryptoServiceProvider();  
ICryptoTransform crypto = des.CreateDecryptor(key, iv);  
MemoryStream cipherStream = new MemoryStream(cipherMessage);  
CryptoStream cryptoStream =  
new CryptoStream(  
cipherStream, crypto, CryptoStreamMode.Read);  
string message;  
message = new StreamReader(cryptoStream).ReadToEnd();

**Answer: D**

**Question: 191**

You are developing an application to assist the user in conducting electronic surveys. The survey consists of 25 true-or-false questions. You need to perform the following tasks:

Initialize each answer to true. Minimize the amount of memory used by each survey.

Which storage option should you choose?

A. BitVector32 answers = new BitVector32(1);  
B. BitVector32 answers = new Bit Vector32(-1);

C. BitArray answers = new BitArray (1);  
D. BitArray answers = new BitArray(-1);

**Answer: B**

**Explanation:**

C & D BitVector32 is more efficient than a BitArray when 32 or less binary flags are required. Primarily because it is a value type.  
Note: we are not sure why B is preferred to A.

**Question: 192**

You are creating an application that lists processes on remote computers. The application requires a method that performs the following tasks: Accept the remote computer name as a string parameter named strComputer. Return an ArrayList object that contains the names of all processes that are running on that computer. You need to write a code segment that retrieves the name of each process that is running on the remote computer and adds the name to the ArrayList object. Which code segment should you use?

A. ArrayList al = new ArrayList();  
Process[] procs = Process.GetProcessesByName(strComputer);  
foreach (Process proc in procs) {  
al.Add(procs);  
}  
B. ArrayList al = new ArrayList();  
Process[] procs = Process.GetProcesses(strComputer);  
foreach (Process proc in procs) {  
al.Add(procs);  
}  
C. ArrayList al = new ArrayList();  
Process[] procs = Process.GetProcessesByName(strComputer);  
foreach (Process proc in procs) {  
al.Add(procs.ProcessName);  
}  
D. ArrayList al = new ArrayList();  
Process[] procs = Process.GetProcesses(strComputer);  
foreach (Process proc in procs) {  
al.Add(procs.ProcessName);  
}

**Answer: D**

**Explanation:**

Call Processes.GetProcesses() supplying the name of the computer and then iterate through the returned collection of processes adding the process name to the arraylist.  
A & C use GetProcessByName() and return processes on the current computer only.  
B adds the entire process to the arraylist rather than just the process name.

**Question: 193**

You need to serialize an object of type List<int> in a binary format. The object is named data. Which code segment should you use?

- A. BinaryFormatter formatter = new BinaryFormatter();  
MemoryStream stream = new MemoryStream();  
formatter.Serialize(stream, data);
- B. BinaryFormatter formatter = new BinaryFormatter();  
MemoryStream stream = new MemoryStream();  
for (int i = 0;  
i < data.Count;  
i++) {  
formatter.Serialize(stream, data[i]);  
}
- C. BinaryFormatter formatter = new BinaryFormatter();  
byte[] buffer = new byte[data.Count];  
MemoryStream stream = new MemoryStream(buffer, true);  
formatter.Serialize(stream, data);
- D. BinaryFormatter formatter = new BinaryFormatter();  
MemoryStream stream = new MemoryStream();  
data.ForEach(delegate(int num)  
{ formatter.Serialize(stream, num);  
}  
);

**Answer: A**

**Explanation:**

create a BinaryFormatter and a MemoryStream and simply use the formatter to serialize the data to the stream.

B Collections support serialization, hence it is not required to try to serialize each item independently.

C The MemoryStream is created to be non resizeable and it is not the correct size.

**Question: 194**

You are writing a method to compress an array of bytes. The bytes to be compressed are passed to the method in a parameter named document.

You need to compress the contents of the incoming parameter.

Which code segment should you use?

- A. MemoryStream inStream = new MemoryStream(document);  
GZipStream zipStream = new GZipStream(inStream,  
CompressionMode.Compress);  
byte[] result = new byte[document.Length];  
zipStream.Write(result, 0, result.Length);  
return result;

```

B. MemoryStream stream = new MemoryStream(document);
GZipStream zipStream = new GZipStream(stream,
CompressionMode.Compress);
zipStream.Write(document, 0, document.Length);
zipStream.Close();
return stream.ToArray();
C. MemoryStream outputStream = new MemoryStream();
GZipStream zipStream = new GZipStream(outputStream,
CompressionMode.Compress);
zipStream.Write(document, 0, document.Length);
zipStream.Close();
return outputStream.ToArray();
D. MemoryStream inputStream = new MemoryStream(document);
GZipStream zipStream = new GZipStream(inputStream,
CompressionMode.Compress);
MemoryStream outputStream = new MemoryStream();
int b;
while ((b = zipStream.ReadByte()) != -1) {
outputStream.WriteByte((byte)b);
} return outputStream.ToArray();

```

**Answer: C**

**Explanation:**

Create a new GZipStream that can compress data and writes to a new MemoryStream object. Call the Write() method of the GZipStream to compress the bytes to the MemoryStream. A & B the GZipStream constructor should take a target stream not a source stream when compressing. The source data to compress is specified in the Write() method of GZipStream. D attempts to process byte by byte. This is unnecessary because the Write method can handle any number of bytes in one go.

**Question: 195**

You write the following code to call a function from the Win32 Application Programming Interface (API) by using platform invoke.

```
int rc = MessageBox(hWnd, text caption, type);
```

You need to define a method prototype. Which code segment should you use?

- A. [DllImport("user32")]public static extern int MessageBox(int hWnd, String text, String caption, uint type);
- B. [DllImport("user32")]public static extern int MessageBoxA(int hWnd, String text, String caption, uint type);
- C. [DllImport("user32")]public static extern int Win32API\_User32\_MessageBox(int hWnd, String text, String caption, uint type);
- D. [DllImport(@"C:\WINDOWS\system32\user32.dll")]public static extern int MessageBox(int hWnd, String text, String caption, uint type);

**Answer: A**

**Explanation:**

Mark the prototype with the Dllimport attribute specifying the library\ dll that the function resides in.

B creates a prototype for the MessageBoxA function not MessageBox .

C it is not necessary to specify the physical path because user32.dll will be in the path environment variable. Also it will not work with versions of windows (some may use c:\winnt\system32)

**Question: 196**

You need to generate a report that lists language codes and region codes.

Which code segment should you use?

- A. 

```
foreach (CultureInfo culture in
CultureInfo.GetCultures(CultureTypes.SpecificCultures)) {
// Output the culture information...}
B. CultureInfo culture = new CultureInfo("");
CultureTypes types = culture.CultureTypes;
// Output the culture information...
C. foreach (CultureInfo culture in
CultureInfo.GetCultures(CultureTypes.NeutralCultures)) {
// Output the culture information...}
D. foreach (CultureInfo culture in
CultureInfo.GetCultures(CultureTypes.ReplacementCultures)) {
// Output the culture information...}
```

**Answer: A**

**Explanation:**

CultureTypes.SpecificCultures will filter all language codes that are specific to a country\region.

B The CultureInfo object created is not associated with any cultures.

C will yield only neutral cultures, they will not be specific to a country\region.

D Replacement cultures are user-defined custom cultures.

**Question: 197**

You are developing a fiscal report for a customer. Your customer has a main office in the United States and a satellite office in Mexico.

You need to ensure that when users in the satellite office generate the report, the current date is displayed in Mexican Spanish format. Which code segment should you use?

- A. 

```
DateTimeFormatInfo dtfi = new CultureInfo("es-MX", false).DateTimeFormat;
DateTime dt = new DateTime(DateTime.Today.Year, DateTime.Today.Month,
DateTime.Today.Day);
string dateString = dt.ToString(dtfi.LongDatePattern);
B. Calendar cal = new CultureInfo("esMX", false).Calendar;
```

```
DateTime dt = new DateTime(DateTime.Today.Year, DateTime.Today.Month,
DateTime.Today.Day);
String dateString = dt.ToString();
C. string dateString = DateTimeFormatInfo.CurrentInfo
GetMonthName(DateTime.Today.Month);
D. string dateString = DateTime.Today.Month.ToString("es-MX");
```

**Answer: A**

**Explanation:**

Create a Mexican Spanish CultureInfo object. Convert the date to a string using the DateTimeFormatInfo returned by the CultureInfo object.  
B does not use the CultureInfo object to convert the date to a string.  
C does not use the Mexican Spanish culture.  
D the DateTime.ToString() method cannot take a string code representation of the culture.

**Question: 198**

You are using the Microsoft Visual Studio 2005 IDE to examine the output of a method that returns a string. You assign the output of the method to a string variable named fName. You need to write a code segment that prints the following on a single line The message: "Test Failed: " The value of fName if the value of fName does not equal "Company" You also need to ensure that the code segment simultaneously facilitates uninterrupted execution of the application. Which code segment should you use?

```
A. Debug.Assert(fName == "Company", "Test Failed: ", fName);
B. Debug.WriteLineIf(fName != "Company", fName, "Test Failed");
C. if (fName != "Company") {
 Debug.Print("Test Failed: ");
 Debug.Print(fName);
}
D. if (fName != "Company") {
 Debug.WriteLine("Test Failed: ");
 Debug.WriteLine(fName);
}
```

**Answer: B**

**Explanation:**

Debug.WriteLineIf() will conditionally write the "Test Failed", it will not interrupt execution of the application.  
A an Assert will stop execution of the application in debug mode if the condition is not met.  
C & D could be used but they execute in the release configurations

**Question: 199**

You are developing an application that will use custom authentication and role-based security. You need to write a code segment to make the runtime assign an unauthenticated principal object

to each running thread.

Which code segment should you use?

- A. AppDomain domain = AppDomain.CurrentDomain;  
domain.SetPrincipalPolicy(PrincipalPolicy.WindowsPrincipal);
- B. AppDomain domain = AppDomain.CurrentDomain;  
domain.SetThreadPrincipal(new WindowsPrincipal(null));
- C. AppDomain domain = AppDomain.CurrentDomain;  
domain.SetAppDomainPolicy(PolicyLevel.CreateAppDomainLevel());
- D. AppDomain domain = AppDomain.CurrentDomain;  
domain.SetPrincipalPolicy(PrincipalPolicy.UnauthenticatedPrincipal);

**Answer: D**

**Explanation:**

Setting the PrincipalPolicy for the AppDomain to UnauthenticatedPrincipal will default the Principal for each thread to an unauthenticated principal .

A sets the policy to WindowsPrincipal, threads will have their principal set according the windows account that they are running as.

B SetThreadPrincipal() does not set the default policy for all new threads. Also a WindowsPrincipal is used instead of UnauthenticatedPrincipal.

C SetAppDomainPolicy is used to set the security policy level for the domain.

**Question: 200**

You need to write a multicast delegate that accepts a DateTime argument. Which code segment should you use?

- A. public delegate int PowerDeviceOn(bool result, DateTime autoPowerOff);
- B. public delegate bool PowerDeviceOn(object sender, EventArgs autoPowerOff);
- C. public delegate void PowerDeviceOn(DateTime autoPowerOff);
- D. public delegate bool PowerDeviceOn(DateTime autoPowerOff);

**Answer: C**

**Explanation:**

A & B the delegates do not accept an argument of type DateTime

D The question does not explicitly mention a return type. Also with multicasting only the return value of the last method called as part of a multicast chain is returned. Hence return values do not tend to be very useful as far as multicasting is concerned.

**Question: 201**

You write a class named Employee that includes the following code segment.

```
public class Employee {
 string employeeId, employeeName, jobTitleName;
 public string GetName() { return employeeName;
 }
 public string GetTitle() { return jobTitleName;
 }
}
```

You need to expose this class to COM in a type library. The COM interface must also facilitate forward-compatibility across new versions of the Employee class. You need to choose a method for generating the COM interface.

What should you do?

- A. Add the following attribute to the class definition.  
`[ClassInterface(ClassInterfaceType.None)]`public class Employee {
- B. Add the following attribute to the class definition.  
`[ClassInterface(ClassInterfaceType.AutoDual)]`public class Employee {
- C. Add the following attribute to the class definition.  
`[ComVisible(true)]`public class Employee {
- D. Define an interface for the class and add the following attribute to the class definition.  
`[ClassInterface(ClassInterfaceType.None)]`public class Employee : IEmployee {

**Answer: D**

### Question: 202

You need to write a multicast delegate that accepts a DateTime argument and returns a Boolean value. Which code segment should you use?

- A. public delegate int PowerDeviceOn(bool, DateTime);
- B. public delegate bool PowerDeviceOn(Object, EventArgs);
- C. public delegate void PowerDeviceOn(DateTime);
- D. public delegate bool PowerDeviceOn(DateTime);

**Answer: D**

### Explanation:

A & C does not return a type Bool

B does not accept a parameter of type DateTime

### Question: 203

You are creating an undo buffer that stores data modifications. You need to ensure that the undo functionality undoes the most recent data modifications first. You also need to ensure that the undo buffer permits the storage of strings only. Which code segment should you use?

- A. `Stack<string> undoBuffer = new Stack<string>();`
- B. `Stack undoBuffer = new Stack();`
- C. `Queue<string> undoBuffer = new Queue<string>();`
- D. `Queue undoBuffer = new Queue();`

**Answer: A**

**Explanation:**

A Stack caters for a last in first out scenario similar to what is required in an undo buffer. By using Generics you can force a strongly typed collection that takes strings only.

B is not strongly typed for strings, it will take any type of object.

C & D Queue is a First in First out collection, it is not appropriate in this instance.

**Question: 204**

You create the definition for a Vehicle class by using the following code segment.

```
public class Vehicle {
 [XmlAttribute(AttributeName = "category")]
 public string vehicleType;
 public string model;
 [XmlIgnore]
 public int year;
 [XmlElement(ElementName = "mileage")]
 public int miles;
 public ConditionType condition;
 public Vehicle() {
 }
 public enum ConditionType {
 [XmlEnum("Poor")] BelowAverage,
 [XmlEnum("Good")] Average,
 [XmlEnum("Excellent")] AboveAverage
 }
}
```

You create an instance of the Vehicle class. You populate the public fields of the Vehicle class instance as shown in the following table:

**Member Value**

vehicleType car

model racer

year 2002

miles 15000

condition AboveAverage

You need to identify the XML block that is produced when this Vehicle class instance is serialized.

Which block of XML represents the output of serializing the Vehicle instance?

A. `<?xml version="1.0" encoding="utf-8"?>`

`<Vehicle`

`xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"`

`xmlns:xsd="http://www.w3.org/2001/XMLSchema"`

```

vehicleType="car">
<model>racer</model>
<miles>15000</miles>
<condition>AboveAverage</condition>
</Vehicle>
B. <?xml version="1.0" encoding="utf-8"?>
<Vehicle
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
category="car">
<model>racer</model>
<mileage>15000</mileage>
<condition>Excellent</condition>
</Vehicle>
C. <?xml version="1.0" encoding="utf-8"?>
<Vehicle
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
category="car">
<model>racer</model>
<mileage>15000</mileage>
<conditionType>Excellent</conditionType>
</Vehicle>
D. <?xml version="1.0" encoding="utf-8"?>
<Vehicle
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
<category>car</category>
<model>racer</model>
<mileage>15000</mileage>
<condition>Excellent</condition>
</Vehicle>

```

**Answer: B**

### **Explanation:**

The XML produced in B matches the class definition provided in the question.

Category is declared to be an attribute of the Vehicle element, this is not the case in answer A and D.

During XML Serialization by default the user type variables are mapped to XML elements. In the case of answer C, the type itself has been mapped instead of the instance variable.

### **Question: 205**

You write the following code to implement the CompanyClass.

```

MyMethod function. public class CompanyClass {
public int MyMethod(int arg) {

```

```
return arg;
}}
```

You need to call the CompanyClass.MyMethod function dynamically from an unrelated class in your assembly. Which code segment should you use?

- A. CompanyClass myClass = new CompanyC1ass();  
Type t = typeof(CompanyClass);  
MethodInfo m = t.GetMethod("MyMethod");  
int i = (int)m.Invoke(this, new object[] { 1 });
- B. CompanyClass myClass = new CompanyClass();  
Type t = typeof(CompanyClass);  
MethodInfo m = t.GetMethod("MyMethod");  
int i = (int) m.Invoke(myClass, new object[] { 1 });
- C. CompanyClass myClass = new CompanyClass();  
Type t = typeof(CompanyClass);  
MethodInfo m = t.GetMethod("CompanyClass.MyMethod");  
int i = (int)m.Invoke(myClass, new objcct[] { 1 });
- D. Type t = Type.GetType("CompanyClass");  
MethodInfo m = t.GetMethod("MyMethod");  
int i = (int)m.Invoke(this, new object[] { 1 });

**Answer: B**

**Explanation:**

Use reflection to get MethodInfo object that corresponds to the MyMethod member function. Call the Invoke() method of MethodInfo

A & D the Invoke method requires the object that the method will fire upon if its an instance method. myClass should have been passed.

C the getMethod() does not require the classname .

**Question: 206**

You are testing a component that serializes the Meeting class instances so that they can be saved to the file system. The Meeting class has the following definition:

```
public class Meeting {
private string title;
public int roomNumber;
public string[] invitees;
public Meeting(){
}
public Meeting(string t){
title = t;
} }
}
```

The component contains a procedure with the following code segment.

```
Meeting myMeeting = new Meeting("Goals");
myMeeting.roomNumber = 1100;
string[] attendees = new string[2]{ "Company", "Mary"};
```

```
myMeeting.invitees = attendees;
XmlSerializer xs = new XmlSerializer(typeof(Meeting));
StreamWriter writer = new StreamWriter(@"C:\Meeting.xml");
xs.Serialize(writer, myMeeting);
writer.Close();
```

You need to identify the XML block that is written to the C:\Meeting.xml file as a result of running this procedure. Which XML block represents the content that will be written to the C:\Meeting.xml file?

A. <?xml version="1.0" encoding="utf-8"?>  
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"  
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">  
<title>Goals</title>  
<roomNumber>1100</roomNumber>  
<invitee>Company</invitee>  
<invitee>Mary</invitee>  
</Meeting>

B. <?xml version="1.0" encoding="utf-8"?>  
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"  
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">  
<roomNumber>1100</roomNumber>  
<invitees>  
<string>Company</string>  
<string>Mary</string>  
</invitees>  
</Meeting>

C. <?xml version="1.0" encoding="utf-8"?>  
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"  
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
title="Goals">  
<roomNumber>1100</roomNumber>  
<invitees>  
<string>Company</string>  
<string>Mary</string>  
</invitees>  
</Meeting>

D. <?xml version="1.0" encoding="utf-8"?>  
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"  
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">  
<roomNumber>1100</roomNumber>  
<invitees>  
<string>Company</string>  
</invitees>  
<invitees>  
<string>Mary</string>  
</invitees>  
</Meeting>

**Answer: B**

**Explanation:**

A & C show title member in the XML. Title is a private member hence will not be serialized to XML.

D Shows multiple Invitees. There is only one object of type Invitees in the class definition.

**Question: 207**

You are changing the security settings of a file named MyData.xml.

You need to preserve the existing inherited access rules. You also need to prevent the access rules from inheriting changes in the future.

Which code segment should you use?

- A. `FileSecurity security = new FileSecurity("mydata.xml", AccessControlSections.All);  
security.SetAccessRuleProtection(true, true);  
File.SetAccessControl("mydata.xml", security);`
- B. `FileSecurity security = new FileSecurity();  
security.SetAccessRuleProtection(true, true);  
File.SetAccessControl("mydata.xml", security);`
- C. `FileSecurity security = File.GetAccessControl("mydata.xml");  
security.SetAccessRuleProtection(true, true);`
- D. `FileSecurity security = File.GetAccessControl("mydata.xml");  
security.SetAuditRuleProtection(true, true);  
File.SetAccessControl("mydata.xml", security);`

**Answer: A**

**Explanation:**

Retrieve the full access control list for the file, prevent access rules from inheriting in the future by calling `Security.SetAccessRuleProtection()`. Finally call `File.SetAccessControl()` to apply the amended `FileSecurity` to the file.

B does not preserve the existing access rules. It overwrites them.

C does not apply the amended `FileSecurity` object back to the file.

D `FileSecurity.SetAuditRuleProtection()` is used for controlling audit rules not access rules.

**Question: 208**

You are writing a method that returns an `ArrayList` named `al`. You need to ensure that changes to the `ArrayList` are performed in a thread-safe manner. Which code segment should you use?

- A. `ArrayList al = new ArrayList();  
lock (al.SyncRoot){  
return al;  
}`
- B. `ArrayList al = new ArrayList();  
lock (al.SyncRoot.GetType()){  
return al;`

```

}
C. ArrayList al = new ArrayList();
Monitor.Enter(al);
Monitor.Exit(al);
return al;
D. ArrayList al = new ArrayList();
ArrayList sync_al = ArrayList.Synchronized(al);
return sync_al;

```

**Answer: D**

**Explanation:**

A & C the lock will be released when the method returns.  
 B Does not lock the arraylist but attempts to lock its type.

**Question: 209**

You are testing a method that examines a running process. This method returns an ArrayList containing the name and full path of all modules that are loaded by the process.

You need to list the modules loaded by a process named C:\TestApps\Process1.exe.

Which code segment should you use?

```

A. ArrayList ar = new ArrayList();
Process[] procs;
ProcessModuleCollection modules;
procs = Process.GetProcesses(@"Process1");
if (procs.Length > 0) {modules = procs[0].Modules;
foreach (ProcessModule mod in modules) {
ar.Add(mod.ModuleName);
}}
B. ArrayList ar = new ArrayList();
Process[] procs;
ProcessModuleCollection modules;
procs =
Process.GetProcesses(@"C:\TestApps\Process1.exe");
if (procs.Length > 0) {
modules = procs[0].Modules;
foreach (ProcessModule mod in modules) {
ar.Add(mod.ModuleName);
}}
C. ArrayList ar = new ArrayList();
Process[] procs;
ProcessModuleCollection modules;
procs = Process.GetProcessesByName(@"Process1");
if (procs.Length > 0) {
modules = procs[0].Modules;
foreach (ProcessModule mod in modules) {
ar.Add(mod.FileName);
}
}

```

```

}}
D. ArrayList ar = new ArrayList();
Process[] procs;
ProcessModuleCollection modules;
procs = Process.GetProcessesByName(@"C:\TestAppsProcess1.exe");
if (procs.Length > 0) {
modules = procs[0].Modules;
foreach (ProcessModule mod in modules) {
ar.Add(mod.FileName);
}}

```

**Answer: C**

**Explanation:**

Process.GetProcessesByName() should be used to return all the processes that match a process name. The modules collection exposes all the modules loaded by the process and can be added to an ArrayList.

A & B GetProcesses() accepts a computer name for retrieving the processes on a remote computer. GetProcessesByName() should be used to return processes by their name.

D the path of the process is not part of the process name.

**Question: 210**

You are writing a custom dictionary. The custom-dictionary class is named MyDictionary. You need to ensure that the dictionary is type safe.

Which code segment should you use?

- A. Class MyDictionaryImplements Dictionary(Of String, String)
  - B. Class MyDictionary Inherits HashTable
  - C. Class MyDictionary Implements IDictionary
  - D. Class MyDictionary
- End Class
- Dim t As New Dictionary(Of String, String)
- Dim dict As MyDictionary = CType(t, MyDictionary)

**Answer: A**

**Question: 211**

You write a class named Employee that includes the following code segment.

```

Private m_EmployeeId As String
Private m_EmployeeName As String
Private m_JobTitleName As String
Public Function GetName() As String
Return m_EmployeeName
End Function
Public Function GetTitle() As String
Return m_JobTitleName

```

End Function

End Class

You need to expose this class to COM in a type library. The COM interface must also facilitate forward-compatibility across new versions of the Employee class. You need to choose a method for generating the COM interface.

What should you do?

A. Add the following attribute to the class

definition.<ClassInterface(ClassInterfaceType.None)> \_

B. Add the following attribute to the class

definition.<ClassInterface(ClassInterfaceType.AutoDual)> \_

Public Class Employee

C. Add the following attribute to the class definition.<ComVisible(True)> \_

Public Class Employee

D. Define an interface for the class and add the following attribute to the class

definition.<ClassInterface(ClassInterfaceType.None)> \_

Public Class EmployeeImplements IEmployee

**Answer: D**

**Question: 212**

You need to serialize an object of type List(Of Integer) in a binary format. The object is named data. Which code segment should you use?

A. Dim formatter As New BinaryFormatter()

Dim ms As New MemoryStream(formatter.Serialize(ms, data))

B. Dim formatter As New BinaryFormatter()

Dim ms As New MemoryStream() For i As Integer = 1 To 20

formatter.Serialize(ms, data(i - 1))

Next

C. Dim formatter As New BinaryFormatter()

Dim buffer As New Byte(data.Count) {}

Dim ms As New MemoryStream(buffer, True)formatter.Serialize(ms, data)

D. Dim formatter As New BinaryFormatter()

Dim ms As New MemoryStream()While ms.CanRead

formatter.Serialize(ms, data)

End While

**Answer: A**

**Question: 213**

You are developing an application for a client residing in Hong Kong.

You need to display negative currency values by using a minus sign. Which code segment should you use?

A. Dim objCulture As NumberFormatInfo = \_

```

New CultureInfo("zh-HK").NumberFormatobjCulture.NumberNegativePattern = 1
Return NumberToPrint.ToString("C", objCulture)
B. Dim objCulture As NumberFormatInfo = _
New CultureInfo("zh-HK").NumberFormatobjCulture.CurrencyNegativePattern = 1
Return NumberToPrint.ToString("C", objCulture)
C. Dim objCulture As NumberFormatInfo = _
New CultureInfo("zh-HK").NumberFormatReturn NumberToPrint.ToString("-{0}",
objCulture)
D. Dim objCulture As NumberFormatInfo = _
New CultureInfo("zh-HK").NumberFormatReturn NumberToPrint.ToString("()",
objCulture)

```

**Answer: B**

**Explanation:**

Use CurrencyNegativePattern property set to 1 to display negative currency values with a minus sign.

A will give a minus sign for negative numbers but not for negative currencies.

C & D The culture has not been to display a minus sign for currency.

**Question: 214**

You are developing a method to hash data with the Secure Hash Algorithm. The data is passed to your method as a byte array named message. You need to compute the hash of the incoming parameter by using SHA1. You also need to place the result into a byte array named hash. Which code segment should you use?

```

A. Dim objSHA As New SHA1CryptoServiceProvider
Dim hash() As Byte = NothingobjSHA.TransformBlock(message, 0, message.Length,
hash, 0)
B. Dim objSHA As New SHA1CryptoServiceProvider
Dim hash() As Byte = BitConverter.GetBytes(objSHA.GetHashCode)
C. Dim objSHA As New SHA1CryptoServiceProvider
Dim hash() As Byte = objSHA.ComputeHash(message)
D. Dim objSHA As New SHA1CryptoServiceProviderobjSHA.GetHashCode()
Dim hash() As Byte = objSHA.Hash

```

**Answer: C**

**Explanation:**

Initialise SHA1 object and call the ComputeHash method supplying the message as a parameter to return the hash code as an array of bytes.

A TransferBlock is more appropriate for hashing part of a message. Also it should be called with TransferEndBlock.

B&C GetHashCode is the method inherited from the Object class. It will not perform a hash on the incoming message.

**Question: 215**

You write the following code.

```
Public Delegate Sub FaxDocs(ByVal sender As Object, _
ByVal args as FaxArgs)
```

You need to create an event that will invoke FaxDocs. Which code segment should you use?

- A. Public Shared Event Fax As FaxDocs
- B. Public Shared Event FaxDocs As FaxArgs
- C. Public Class FaxArgs  
Inherits EventArgs  
Private coverPageInfo As String  
Public Sub New(ByVal coverInfo As String)  
Me.coverPageInfo = coverInfo  
End Sub  
Public ReadOnly Property CoverPageInformation As String  
Get  
Return Me.coverPageInfo  
End Get  
End Property  
End Class
- D. Public Class FaxArgs  
Inherits EventArgs  
Private coverPageInfo As String  
Public ReadOnly Property CoverPageInformation As String  
Get  
Return Me.coverPageInfo  
End Get  
End Property  
End Class

**Answer: A**

**Explanation:**

An event is declared by using the event keyword followed by a delegate type and then a name for the event.

B fax is not a delegate type.

C&D do not declare events.

**Question: 216**

You need to write a code segment that will create a common language runtime (CLR) unit of isolation within an application. Which code segment should you use?

- A. Dim mySetup As AppDomainSetup = \_  
AppDomain.CurrentDomain.SetupInformationmySetup.ShadowCopyFiles = "true"
- B. Dim myProcess As System.Diagnostics.Process myProcess = New  
System.Diagnostics.Process()

C. Dim domain As AppDomain domain =  
AppDomain.CreateDomain("CompanyDomain")  
D. Dim myComponent As System.ComponentModel.Component myComponent = New  
System.ComponentModel.Component()

**Answer: C**

**Explanation:**

Create a new ApplicationDomain using the AppDomain.CreateDomain() method.

A ShadowCopyFiles property of AppDomainSetup controls whether shadow copying is enabled or disabled.

B the Process class is used to represent an existing process running on a computer.

D The ComponentModel.Component class is used for sharing components between applications.

**Question: 217**

You are developing a class library. Portions of your code need to access system environment variables.

You need to force a runtime SecurityException only when callers that are higher in the call stack do not have the necessary permissions.

Which call method should you use?

- A. Demand()
- B. Assert()
- C. PermitOnly()
- D. Deny()

**Answer: A**

**Explanation:**

Demand forces all callers in the call stack to have the specified permission.

PermitOnly will instruct the runtime to reduce the access by only allowing callers with the permissions explicitly stated and nothing else.

Assert will ignore the permissions of callers and allow them indiscriminately.

Deny will explicitly deny access if the caller has the specified permission.

**Question: 218**

You are developing a custom event handler to automatically print all open documents.

The event handler helps specify the number of copies to be printed. You need to develop a custom event arguments class to pass as a parameter to the event handler.

Which code segment should you use?

```
A. Public Class PrintingArgs
Private _copies As Integer
Public Sub New(ByVal numberOfCopies As Integer)
Me._copies = numberOfCopies
```

```

End Sub
Public ReadOnly Property Copies() As Integer
Get
Return Me._copies
End Get
End Property
End Class
B. Public Class PrintingArgs
Inherits EventArgs
Private _copies As Integer
Public Sub New(ByVal numberOfCopies As Integer)
Me._copies = numberOfCopies

End Sub
Public ReadOnly Property Copies() As Integer
Get
Return Me._copies
End Get
End Property
End Class
C. Public Class PrintingArgs
Private eventArgs As EventArgs
Public Sub New(ByVal args As EventArgs)
Me.eventArgs = args
End Sub
Public ReadOnly Property Args() As EventArgs
Get
Return eventArgs
End Get
End Property
End Class
D. Public Class PrintingArgs
Inherits EventArgs
Private copies As IntegerEnd Class

```

**Answer: B**

**Explanation:**

The event handler will require a parameter of type EventArgs or a derived type. The derived type in this example will question states that the event handler helps specify the number of documents that require printing, this information will have to come from the derived EventArgs class in the form of an instance variable.

A & C do not derive from EventArgs hence cannot fit into the event handling model.

D does not expose the copies instance variable.

**Question: 219**

You are developing an application that dynamically loads assemblies from an application directory.

You need to write a code segment that loads an assembly named Company1.dll into the current application domain. Which code segment should you use?

- A. Dim domain As AppDomain = AppDomain.CurrentDomain  
Dim myPath As String = \_ Path.Combine(domain.BaseDirectory, "Company1.dll")  
Dim asm As [Assembly] = [Assembly].LoadFrom(myPath)
- B. Dim domain As AppDomain = AppDomain.CurrentDomain  
Dim myPath As String = \_ Path.Combine(domain.BaseDirectory, "Company1.dll")  
Dim asm As [Assembly] = [Assembly].Load(myPath)
- C. Dim domain As AppDomain = AppDomain.CurrentDomain  
Dim myPath As String = \_ Path.Combine(domain.DynamicDirectory, "Company1.dll")  
Dim asm As [Assembly] = \_ AppDomain.CurrentDomain.Load(myPath)
- D. Dim domain As AppDomain = AppDomain.CurrentDomain  
Dim asm As [Assembly] = domain.GetData("Company1.dll")

**Answer: A**

**Explanation:**

The Assembly.LoadFrom() method can be called to dynamically load an assembly from file.

B the Load method requires an AssemblyName object as a parameter.

C it is not possible to use AppDomain.Load to load an assembly from file.

D AppDomain.GetData gets information stored in the AppDomain for the specified assembly. It cannot load an assembly.

**Question: 220**

You need to read the entire contents of a file named Message.txt into a single string variable.

Which code segment should you use?

- A. Dim result As String = Nothing  
Dim reader As New StreamReader("Message.txt")result = reader.Read().ToString()
- B. Dim result As String = Nothing  
Dim reader as New StreamReader("Message.txt")result = reader.ReadToEnd()
- C. Dim result As String = string.EmptyDim reader As New StreamReader("Message.txt")  
While Not reader.EndOfStream  
result &= reader.ToString()  
End While
- D. Dim result as String = Nothing  
Dim reader As New StreamReader("Message.txt")result = reader.ReadLine()

**Answer: B**

**Explanation:**

Create a StreamReader based on the file and call the ReadToEnd() method to quickly read the

entire file and return a string.

A & D does not read the entire file.

C calling ToString() on the reader will give a string representation of the stream and will not read from the stream.

**Question: 221**

You need to write a code segment that performs the following tasks: ?

Retrieves the name of each paused service. ?

Passes the name to the Add method of Collection1. Which code segment should you use?

A. Dim searcher As ManagementObjectSearcher = \_New ManagementObjectSearcher( \_  
"Select \* from Win32\_Service where State = 'Paused'")For Each svc As  
ManagementObject In searcher.Get()  
Collection1.Add(svc("DisplayName"))

Next

B. Dim searcher As ManagementObjectSearcher = \_New ManagementObjectSearcher ( \_  
"Select \* from Win32\_Service", "State = 'Paused'")For Each svc As ManagementObject  
In searcher.Get()  
Collection1.Add(svc("DisplayName"))

Next

C. Dim searcher As ManagementObjectSearcher = \_ New ManagementObjectSearcher( \_  
"Select \* from Win32\_Service")For Each svc As ManagementObject In searcher.Get()  
If svc("State").ToString() = "Paused" Then  
Collection1.Add(svc("DisplayName"))

End If

Next

D. Dim searcher As New ManagementObjectSearcher()searcher.Scope = New  
ManagementScope("Win32\_Service")For Each svc As ManagementObject In  
searcher.Get()

If svc("State").ToString() = "Paused" Then

Collection1.Add(svc("DisplayName"))

End If

Next

**Answer: A**

**Explanation:**

Use the ManagmentObjectSearcher to search for all services with a paused state. Iterate over the returned collection and add the display name to Collection1.

B The constructor is invoked incorrectly.

C & D the query is incorrect. The searcher does not restrict to paused services.

**Question: 222**

You are writing a method that accepts a string parameter named message.

Your method must break the message parameter into individual lines of text and pass each line to

a second method named Process.

Which code segment should you use?

- A. Dim reader As New  
StringReader(message)ProcessMessage(reader.ReadToEnd())reader.Close()
- B. Dim reader As New StringReader(message)While reader.Peek() <> -1  
Dim line as String = reader.Read().ToString()  
ProcessMessage(line)  
End Whilereader.Close()
- C. Dim reader As New  
StringReader(message)ProcessMessage(reader.ToString())reader.Close()
- D. Dim reader As New StringReader(message)While reader.Peek() <> -1  
ProcessMessage(reader.ReadLine())  
End Whilereader.Close()

**Answer: D**

**Explanation:**

StringReader.ReadLine() allows for lines to be read line by line.

A ReadToEnd() will read the entire stream.

B Read() will not read the line but only the next character.

C will not read from the message but will just give a string representation of the reader.

**Question: 223**

You create a method that runs by using the credentials of the end user. You need to use Microsoft Windows groups to authorize the user. You must add a code segment that identifies whether a user is in the local group named Clerk.

Which code segment should you use?

- A. Dim objUser As WindowsIdentity = WindowsIdentity.GetCurrentFor Each objGroup  
As IdentityReference In objUser.Groups  
Dim objNT As NTAccount = \_  
DirectCast(objGroup.Translate( \_  
Type.GetType("NTAccount")), NTAccount)  
Dim blnAuth As Boolean = objNT.Value.Equals( \_  
Environment.MachineName & "\\Clerk")  
If blnAuth Then Exit For  
Next
- B. Dim objUser As WindowsPrincipal = \_  
DirectCast(Thread.CurrentPrincipal, WindowsPrincipal)  
Dim blnAuth As Boolean = objUser.IsInRole("Clerk")
- C. Dim objUser As GenericPrincipal = \_  
DirectCast(Thread.CurrentPrincipal, GenericPrincipal)  
Dim blnAuth As Boolean = objUser.IsInRole("Clerk")
- D. Dim objUser As WindowsPrincipal = \_  
DirectCast(Thread.CurrentPrincipal, WindowsPrincipal)  
Dim blnAuth As Boolean = \_

`objUser.IsInRole(Environment.MachineName)`

**Answer: B**

**Explanation:**

To check the role membership of the current windows user, user the `IsInRole()` method of the `WindowsPrincipal` in the current thread.

A it is a lot more complicated to iterate through all the groups the user belongs to and checking for matches. The Principal classes are for this very purposes and should be used.

C uses `GenericPrincipal`. `WindowsPrincipal` should be used for windows accounts. There is an invalid cast from `WindowsPrincipal` to `GenericPrincipal`.

D does not specify the group correctly.

**Question: 224**

You are developing a method to hash data for later verification by using the MD5 algorithm. The data is passed to your method as a byte array named `message`. You need to compute the hash of the incoming parameter by using MD5. You also need to place the result into a byte array. Which code segment should you use?

- A. `Dim objAlgo As HashAlgorithm = HashAlgorithm.Create("MD5")`  
`Dim hash() As Byte = objAlgo.ComputeHash(message)`
- B. `Dim objAlgo As HashAlgorithm = HashAlgorithm.Create("MD5")`  
`Dim hash() As Byte = BitConverter.GetBytes(objAlgo.GetHashCode)`
- C. `Dim objAlgo As HashAlgorithmobjAlgo = HashAlgorithm.Create(message.ToString)`  
`Dim hash() As Byte = objAlgo.Hash`
- D. `Dim objAlgo As HashAlgorithm = HashAlgorithm.Create("MD5")`  
`Dim hash() As ByteobjAlgo.TransformBlock(message, 0, message.Length, hash, 0)`

**Answer: A**

**Explanation:**

Create a `HashAlgorithm` object based on the MD5 algorithm and call the `ComputerHash` method that will return the hash as an array of bytes.

B `GetHashCode()` will call the method inherited from object, it will not hash the message.

C The parameter of the `Create` method should specify the type of hashing algorithm to use not the message to be hashed.

D `TransferBlock` is more appropriate for hashing part of a message. Also it should be called with `TransferEndBlock`.

**Question: 225**

You are developing a fiscal report for a customer. Your customer has a main office in the United States and a satellite office in Mexico.

You need to ensure that when users in the satellite office generate the report, the current date is displayed in Mexican Spanish format. Which code segment should you use?

- A. `Dim DTFormat As DateTimeFormatInfo = _`

```

New CultureInfo("es-MX", False).DateTimeFormatDim DT As New DateTime(_
DateTime.Today.Year, DateTime.Today.Month, DateTime.Today.Day)
Dim strDate As String = _
DT.ToString(DTFormat.LongDatePattern)
B. Dim objCalendar As Calendar = _
New CultureInfo("es-MX", False).CalendarDim DT As New DateTime(_
DateTime.Today.Year, DateTime.Today.Month, DateTime.Today.Day)
Dim strDate As String = DT.ToString
C. Dim strDate As String = _
DateTimeFormatInfo.CurrentInfo.GetMonthName(_
DateTime.Today.Month)
D. Dim strDate As String = _
DateTime.Today.Month.ToString("es-MX")

```

**Answer: A**

**Explanation:**

Create a Mexican Spanish CultureInfo object. Convert the date to a string using the DateTimeFormatInfo returned by the CultureInfo object.  
 B does not use the CultureInfo object to convert the date to a string.  
 C does not use the Mexican Spanish culture.  
 D the DateTime.ToString() method cannot take a string code representation of the culture.

**Question: 226**

You are developing an application that will use custom authentication and role-based security. You need to write a code segment to make the runtime assign an unauthenticated principal object to each running thread. Which code segment should you use?

```

A. Dim objDomain As AppDomain =
AppDomain.CurrentDomainobjDomain.SetPrincipalPolicy(_
PrincipalPolicy.WindowsPrincipal)
B. Dim objDomain As AppDomain =
AppDomain.CurrentDomainobjDomain.SetThreadPrincipal(New
WindowsPrincipal(Nothing))
C. Dim objDomain As AppDomain =
AppDomain.CurrentDomainobjDomain.SetAppDomainPolicy(_
PolicyLevel.CreateAppDomainLevel())
D. Dim objDomain As AppDomain =
AppDomain.CurrentDomainobjDomain.SetPrincipalPolicy(_
PrincipalPolicy.UnauthenticatedPrincipal)

```

**Answer: D**

**Explanation:**

Setting the PrincipalPolicy for the AppDomain to UnauthenticatedPrincipal will default the Principal for each thread to an unauthenticated principal .

A sets the policy to WindowsPrincipal, threads will have their principal set according the windows account that they are running as.

B SetThreadPrincipal() does not set the default policy for all new threads. Also a WindowsPrincipal is used instead of UnauthenticatedPrincipal.

C SetAppDomainPolicy is used to set the security policy level for the domain.

**Question: 227**

You need to create a method to clear a Queue named q. Which code segment should you use?

A. Dim e As Object For Each e In qq.Dequeue()

Next

B. Dim e As Object For Each e In qq.Enqueue(Nothing)

Next

C. q.Clear()

D. q.Dequeue()

**Answer: C**

**Explanation:**

Simply call the Clear() method to empty a queue.

A Dequeueing all of the items in a queue will also serve the same affect but it is a lot more roundabout.

B attempts to re-queue items that are already in the queue

D will de-queue only one item that is at the front of the queue.

**Question: 228**

You are developing a class library that will open the network socket connections to computers on the network. You will deploy the class library to the global assembly cache and grant it full trust. You write the following code to ensure usage of the socket connections.

```
Dim objPermission As SocketPermission = New
```

```
_SocketPermission(System.Security.Permissions.PermissionState.Unrestricted)objPermission.Assert()
```

Some of the applications that use the class library might not have the necessary permissions to open the network socket connections.

You need to cancel the assertion.

Which code segment should you use?

A. CodeAccessPermission.RevertAssert()

B. CodeAccessPermission.RevertDeny()

C. objPermission.Deny()

D. objPermission.PermitOnly()

**Answer: A**

**Explanation:**

CodeAccessPermission.RevertAssert() should be used to undo a previous Assert call.  
B is used to revert a previous deny call.  
C & D are used to reduce the CAS permissions, they do not undo a previous Assert call.

**Question: 229**

You are writing an application that uses SOAP to exchange data with other applications.  
You use a Department class that inherits from ArrayList to send objects to another application.  
The Department object is named dept.  
You need to ensure that the application serializes the Department object for transport by using SOAP. Which code should you use?

- A. Dim formatter As New SoapFormatter()  
Dim buffer As Byte() = New Byte(dept.Capacity) {}  
Dim myStream As New MemoryStream(buffer) Dim o As Object For Each o In dept  
formatter.Serialize(myStream, o)  
Next
- B. Dim formatter As New SoapFormatter()  
Dim buffer As Byte() = New Byte(dept.Capacity)  
Dim myStream As New MemoryStream(buffer)formatter.Serialize(myStream, dept)
- C. Dim formatter As New SoapFormatter()  
Dim myStream As New MemoryStream()  
Dim o as Object For Each o In dept  
formatter.Serialize(myStream, o)  
Next
- D. Dim formatter As New SoapFormatter()  
Dim myStream As New MemoryStream()formatter.Serialize(myStream, dept)

**Answer: D**

**Explanation:**

Simply serialize the entire object to a stream using a SoapFormatter.  
A&C attempt to serialize components of the object rather the object itself.  
B attempts to serialize to an array, however the array will not be big enough to store the serialized object because it is not sized on the entire object.

**Question: 230**

You write the following code to call a function from the Win32 Application Programming Interface (API) by using platform invoke.

```
Dim r As Integer = MessageBox(hWnd, strText, strCaption, strType)
```

You need to define a method prototype. Which code segment should you use?

- A. <DllImport("user32")> \_Function MessageBox( \_  
ByVal hWnd As IntPtr, ByVal text As String, \_  
ByVal Caption As String, ByVal t As UInt32) As IntegerEnd Function
- B. <DllImport("user32")> \_Function MessageBoxA( \_  
ByVal hWnd As IntPtr, ByVal text As String, \_

ByVal Caption As String, ByVal t As UInt32) As IntegerEnd Function  
 C. <DllImport("user32")> \_Function Win32API\_User32\_MessageBox ( \_  
 ByVal hWnd As IntPtr, ByVal text As String, \_  
 ByVal Caption As String, ByVal t As UInt32) As IntegerEnd Function  
 D. <DllImport("C:\WINDOWS\system32\user32.dll ")> \_Function MessageBox( \_  
 ByVal hWnd As IntPtr, ByVal text As String, \_  
 ByVal Caption As String, ByVal t As UInt32) As IntegerEnd Function

**Answer: A**

**Explanation:**

Mark the prototype with the Dllimport attribute specifying the library\ dll that the function resides in.  
 B creates a prototype for the MessageBoxA function not MessageBox .  
 C it is not necessary to specify the physical path because user32.dll will be in the path environment variable. Also it will not work with versions of windows (some may use c:\winnt\system32)

**Question: 231**

You are changing the security settings of a file named MyData.xml.  
 You need to preserve the existing inherited access rules. You also need to prevent the access rules from inheriting changes in the future.  
 Which code segment should you use?

A. Dim objSecurity As New FileSecurity( \_  
 "MyData.xml", AccessControlSections.All)objSecurity.SetAccessRuleProtection(True, True)  
 File.SetAccessControl("MyData.xml", objSecurity)  
 B. Dim objSecurity As New FileSecurity()objSecurity.SetAccessRuleProtection(True, True)  
 File.SetAccessControl("MyData.xml", objSecurity)  
 C. Dim objSecurity As FileSecurity =  
 \_File.GetAccessControl("MyData.xml")objSecurity.SetAccessRuleProtection(True, True)  
 D. Dim objSecurity As FileSecurity =\_  
 File.GetAccessControl("MyData.xml")objSecurity.SetAuditRuleProtection(True, True)  
 File.SetAccessControl("myData.xml", objSecurity)

**Answer: A**

**Explanation:**

Retrieve the full access control list for the file, prevent access rules from inheriting in the future by calling Security.SetAccessRuleProtection(). Finally call File.SetAccessControl() to apply the amended FileSecurity to the file.  
 B does not preserve the existing access rules. It overwrites them.  
 C does not apply the amended FileSecurity object back to the file.  
 D FileSecurity.SetAuditRuleProtection() is used for controlling audit rules not access rules.

**Question: 232**

You are using the Microsoft Visual Studio 2005 IDE to examine the output of a method that returns a string. You assign the output of the method to a string variable named fName. You need to write a code segment that prints the following on a single line The message: "Test Failed: " The value of fName if the value of fName does not equal "Company" You also need to ensure that the code segment simultaneously facilitates uninterrupted execution of the application. Which code segment should you use?

- A. Debug.Assert(fName = "Company", "Test Failed: ", fName)
- B. Debug.WriteLineIf(fName <> "Company", \_ fName, "Test Failed")
- C. If fName <> "Company" Then

```
Debug.Print("Test Failed: ")
Debug.Print(fName)
End If
D. If fName <> "Company" Then
Debug.WriteLine("Test Failed: ")
Debug.WriteLine(fName)
End If
```

**Answer: B**

**Explanation:**

Debug.WriteLineIf() will conditionally write the "Test Failed", it will not interrupt execution of the application.

A an Assert will stop execution of the application in debug mode if the condition is not met.

C & D could be used but they execute in the release configurations

**Question: 233**

You create an application that stores information about your customers who reside in various regions. You are developing internal utilities for this application.

You need to gather regional information about your customers in Canada.

Which code segment should you use?

- A. For Each objCulture As CultureInfo In  
\_CultureInfo.GetCultures(CultureTypes.SpecificCultures)  
...Next
- B. Dim objCulture As New CultureInfo("CA")  
...
- C. Dim objRegion As New RegionInfo("CA")  
...
- D. Dim objRegion As New RegionInfo("")If objRegion.Name = "CA" Then  
...End If

**Answer: C**

**Explanation:**

The RegionInfo class can be used to get information about a region.

A & B CultureInfo is used to control formatting, sorting & comparing of culture sensitive data. E.g currencies, calendar dates etc.

D Does not initialise the RegionInfo object correctly i.e to Canada.

**Question: 234**

You create an application to send a message by e-mail. An SMTP server is available on the local subnet. The SMTP server is named smtp.Company.com.

To test the application, you use a source address, me@Company.com, and a target address, you@Company.com.

You need to transmit the e-mail message. Which code segment should you use?

A. Dim MailFrom As New MailAddress("me@Company.com", "Me")

Dim MailTo As New MailAddress("you@Company.com", "You")

Dim Message As New MailMessage(MailFrom, MailTo)Message.Subject =

"Greetings"Message.Body = "Test"Message.Dispose()

B. Dim SMTPClient As String = "smtp.Company.com"

Dim MailFrom As String = me@Company.com

Dim MailTo As String = you@Company.com

Dim Subject As String = "Greetings"

Dim Body As String = "Test"Dim Message As New MailMessage(MailFrom, MailTo, Subject, SMTPClient)

C. Dim MailFrom As New MailAddress("me@Company.com", "Me")

Dim MailTo As New MailAddress("you@Company.com", "You")

Dim Message As New MailMessage(MailFrom, MailTo)Message.Subject =

"Greetings"Message.Body = "Test"

Dim objClient As New SmtpClient("smtp.Company.com")objClient.Send(Message)

D. Dim MailFrom As New MailAddress("me@Company.com", "Me")

Dim MailTo As New MailAddress("you@Company.com", "You")

Dim Message As New MailMessage(MailFrom, MailTo)Message.Subject =

"Greetings"Message.Body = "Test"

Dim Info As New SocketInformationDim Client As New Socket(Info)

Dim Enc As New ASCIIEncodingDim Bytes() As Byte =

Enc.GetBytes(Message.ToString)Client.Send(Bytes)

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

To Send a simple mail message construct a MailMessage object and a SmtpClient object. Call the SmtpClient.Send instance method supplying the MailMessage object as a parameter.

A creates a MailMessage but then destroys it.

B creates a MailMessage but then does not do anything with it.

D tries to do something with sockets, this is unnecessary because there is a SMTP server available. The question implies delivering the mail via SMTP.

**Question: 235**

You are developing a fiscal report for Company.com. Company.com has a main office in the United States and a satellite office in the UK.

You need to ensure that when users in the satellite office generate the report, the current date is displayed in Mexican Spanish format. Which code segment should you use?

- A. Dim DTFormat As DateTimeFormatInfo = \_  
New CultureInfo("es-MX", False).DateTimeFormat  
Dim DT As New DateTime( \_  
DateTime.Today.Year, DateTime.Today.Month, DateTime.Today.Day)  
Dim strDate As String = \_  
DT.ToString(DTFormat.LongDatePattern)
- B. Dim objCalendar As Calendar = \_  
New CultureInfo("es-MX", False).Calendar  
Dim DT As New DateTime( \_  
DateTime.Today.Year, DateTime.Today.Month, DateTime.Today.Day)  
Dim strDate As String = DT.ToString
- C. Dim strDate As String = \_  
DateTimeFormatInfo.CurrentInfo.GetMonthName( \_  
DateTime.Today.Month)
- D. Dim strDate As String = \_  
DateTime.Today.Month.ToString("es-MX")

**Answer: A**

**Question: 236**

You need to return the contents of an isolated storage file as a string. The file is machine-scoped and is named Settings.dat. Which code segment should you use?

- A. Dim objStream As IsolatedStorageFileStream  
objStream = New IsolatedStorageFileStream( \_  
"Settings.dat", FileMode.Open)  
Dim result As String = New StreamReader(objStream).ReadToEnd
- B. Dim objFile As IsolatedStorageFile  
objFile = IsolatedStorageFile.GetMachineStoreForAssembly  
Dim objStream As IsolatedStorageFileStream  
objStream = New IsolatedStorageFileStream( \_  
"Settings.dat", FileMode.Open, objFile)  
Dim result As String = New StreamReader(objStream).ReadToEnd
- C. Dim objStream As IsolatedStorageFileStream  
objStream = New IsolatedStorageFileStream( \_  
"Settings.dat", FileMode.Open)  
Dim result As String = objStream.ToString
- D. Dim objFile As IsolatedStorageFile  
objFile = IsolatedStorageFile.GetMachineStoreForAssembly  
Dim objStream As IsolatedStorageFileStream  
objStream = New IsolatedStorageFileStream( \_  
"Settings.dat", FileMode.Open, objFile)  
Dim result As String = objStream.ToString

**Answer: B**

**Explanation:**

Retrieve the IsolatedStorageFile for the machine store. Use an IsolatedStorageFileStream to read from the desired file within the machine store.

A & C do not get the IsolatedStorageFile for the machine context.

D returns a string representation of the IsolatedStorageFileStream object not a String of the files contents as the question requests.

**Question: 237**

You are developing a method to decrypt data that was encrypted with the Triple DES Algorithm. The method accepts the following parameters: The byte array to be decrypted, which is named cipherMessageThe key, which is named keyAn initialization vector, which is named iv You need to decrypt the message by using the TripleDES class and place the result in a string.

Which code segment should you use?

A. Dim objDES As New TripleDESCryptoServiceProviderobjDES.BlockSize =  
cipherMessage.LengthDim objCrypto As ICryptoTransform = \_  
objDES.CreateDecryptor(key, iv)

Dim cipherStream As New MemoryStream(cipherMessage)

Dim cryptoStream As New CryptoStream( \_  
cipherStream, objCrypto, CryptoStreamMode.Read)

Dim message As Stringmessage = New StreamReader(cryptoStream).ReadToEnd

B. Dim objDES As New TripleDESCryptoServiceProviderobjDES.FeedbackSize =  
cipherMessage.LengthDim objCrypto As ICryptoTransform = \_  
objDES.CreateDecryptor(key, iv)

Dim cipherStream As New MemoryStream(cipherMessage)

Dim cryptoStream As New CryptoStream( \_  
cipherStream, objCrypto, CryptoStreamMode.Read)

Dim message As Stringmessage = New StreamReader(cryptoStream).ReadToEnd

C. Dim objDES As New TripleDESCryptoServiceProvider  
Dim objCrypto As ICryptoTransform = \_  
objDES.CreateDecryptor()

Dim cipherStream As New MemoryStream(cipherMessage)

Dim cryptoStream As New CryptoStream( \_  
cipherStream, objCrypto, CryptoStreamMode.Read)

Dim message As Stringmessage = New StreamReader(cryptoStream).ReadToEnd

D. Dim objDES As New TripleDESCryptoServiceProvider  
Dim objCrypto As ICryptoTransform = \_  
objDES.CreateDecryptor(key, iv)

Dim cipherStream As New MemoryStream(cipherMessage)

Dim cryptoStream As New CryptoStream( \_  
cipherStream, objCrypto, CryptoStreamMode.Read)

Dim message As Stringmessage = New StreamReader(cryptoStream).ReadToEnd

**Answer: D**

**Question: 238**

You are creating a class that performs complex financial calculations. The class contains a method named `GetCurrentRate` that retrieves the current interest rate and a variable named `currRate` that stores the current interest rate.

You write serialized representations of the class.

You need to write a code segment that updates the `currRate` variable with the current interest rate when an instance of the class is deserialized. Which code segment should you use?

- A. `<OnSerializing> _Friend Sub UpdateValue (ByVal context As StreamingContext)  
currRate = GetCurrentRate()  
End Sub`
- B. `<OnSerializing> _ Friend Sub UpdateValue(ByVal info As SerializationInfo)  
info.AddValue("currentRate", GetCurrentRate())  
End Sub`
- C. `<OnDeserializing> _ Friend Sub UpdateValue(ByVal info As SerializationInfo)  
info.AddValue("currentRate", GetCurrentRate())  
End Sub`
- D. `<OnDeserialized> _Friend Sub UpdateValue (ByVal context As StreamingContext)  
currRate = GetCurrentRate()  
End Sub`

**Answer: D****Explanation:**

A method with the `OnDeserialized` attribute will be called after Deserialization and any instance variables can be set.

A & B the method will fire during serializing, the question is concerned with reconstructing the object during deserialization.

C the `OnDeserializing` attribute is useful for default values. `OnDeserializing` attribute works with a method that contains a `StreamContext` parameter and not a `SerializationInfo` parameter.

**Question: 239**

You are writing an application that uses isolated storage to store user preferences. The application uses multiple assemblies. Multiple users will use this application on the same computer. You need to create a directory named `Preferences` in the isolated storage area that is scoped to the current Microsoft Windows identity and assembly.

Which code segment should you use?

- A. `Dim objStore As IsolatedStorageFileobjStore =  
IsolatedStorageFile.GetUserStoreForAssemblyobjStore.CreateDirectory("Preferences")`
- B. `Dim objStore As IsolatedStorageFileobjStore =  
IsolatedStorageFile.GetMachineStoreForAssemblyobjStore.CreateDirectory("Preferences")`
- C. `Dim objStore As IsolatedStorageFileobjStore =  
IsolatedStorageFile.GetUserStoreForDomainobjStore.CreateDirectory("Preferences")`
- D. `Dim objStore As IsolatedStorageFileobjStore =  
IsolatedStorageFile.GetUserStoreForApplicationobjStore.CreateDirectory("Preferences")`

**Answer: A**

**Explanation:**

The user store for the assembly is the correct store that is required. It is returned by `IsolatedStorageFile.GetUserStoreForAssembly()`.

B,C & D return Isolated Storage File stores of incorrect scope

**Question: 240**

You are developing a method that searches a string for a substring. The method will be localized to Italy.

Your method accepts the following parameters: The string to be searched, which is named `SearchList` The string for which to search, which is named `SearchValue` You need to write the code. Which code segment should you use?

A. `Return SearchList.IndexOf(SearchValue)`

B. `Dim objComparer As CompareInfo = _`

`New CultureInfo("it-IT").CompareInfoReturn objComparer.Compare(SearchList, SearchValue)`

C. `Dim objComparer As CompareInfo = _`

`New CultureInfo("it-IT").CompareInfoIf SearchList.IndexOf(SearchValue) > 0 Then Return TrueElse`

`Return FalseEnd If`

D. `Dim objComparer As CompareInfo = _`

`New CultureInfo("it-IT").CompareInfoIf objComparer.IndexOf(SearchList, SearchValue) > 0 Then`

`Return TrueElse`

`Return FalseEnd If`

**Answer: D**

**Question: 241**

You are developing a method to encrypt sensitive data with the Data Encryption Standard (DES) algorithm. Your method accepts the following parameters:

The byte array to be encrypted, which is named `message`An encryption key, which is named `key`An initialization vector, which is named `iv` You need to encrypt the data. You also need to write the encrypted data to a `MemoryStream` object.

Which code segment should you use?

A. `Dim objDES As New DESCryptoServiceProviderobjDES.BlockSize = message.Length`

`Dim objCrypto As ICryptoTransform = obj`

`DES.CreateDecryptor(key, iv)`

`Dim cipherStream As New MemoryStream`

`Dim cryptoStream As New CryptoStream(cipherStream, objCrypto, CryptoStreamMode.Write)`

B. `Dim objDES As New DESCryptoServiceProvider`

```

Dim objCrypto As ICryptoTransform = objDES.CreateDecryptor(key, iv)
Dim cipherStream As New MemoryStream
Dim cryptoStream As New CryptoStream(cipherStream, objCrypto,
CryptoStreamMode.Write)
cryptoStream.Write(message, 0, message.Length)
C. Dim objDES As New DESCryptoServiceProvider
Dim objCrypto As ICryptoTransform = obj
DES.CreateDecryptor()
Dim cipherStream As New MemoryStream
Dim cryptoStream As New CryptoStream(cipherStream, objCrypto,
CryptoStreamMode.Write)
cryptoStream.Write(message, 0, message.Length)
D. Dim objDES As New DESCryptoServiceProvider
Dim objCrypto As ICryptoTransform = obj
DES.CreateEncryptor(key, iv)
Dim cipherStream As New MemoryStream
Dim cryptoStream As New CryptoStream(cipherStream, objCrypto,
CryptoStreamMode.Write)
cryptoStream.Write(message, 0, message.Length)

```

**Answer: D**

**Explanation:**

Use the DesCryptoServiceProvider to create a new encryptor. Create a CryptoStream that encrypt directly to the MemoryStream and call the Write() method to perform the encryption.

- A Uses a blocksize set to size of the entire message
- B creates a decryptor instead of an encryptor.
- C does not initialise the encryptor with the key and iv correctly.

**Question: 242**

You develop a service application named FileService. You deploy the service application to multiple servers on your network. You implement the following code segment. (Line numbers are included for reference only.)

```

01 Public Sub StartService(ByVal serverName As String)
02 Dim ctrl As ServiceController = _
03 New ServiceController("FileService")
04 If ctrl.Status = ServiceControllerStatus.Stopped Then
05 End If
06 End Sub

```

You need to develop a routine that will start FileService if it stops. The routine must start FileService on the server identified by the serverName input parameter.

Which two lines of code should you add to the code segment? (Each correct answer presents part of the solution. Choose two.)

- A. Insert the following line of code between lines 03 and 04: ctrl.ServiceName = serverName

- B. Insert the following line of code between lines 03 and 04:ctrl.MachineName = serverName
- C. Insert the following line of code between lines 03 and 04:ctrl.Site.Name = serverName
- D. Insert the following line of code between lines 04 and 05:ctrl.Continue()
- E. Insert the following line of code between lines 04 and 05:ctrl.Start()
- F. Insert the following line of code between lines 04 and 05:ctrl.ExecuteCommand(0)

**Answer: B, E**

**Explanation:**

The ServiceController is capable of controller services on other computers, the MachineName should be specified. The service should be started with the Start() method if it is in the stopped state.

Setting the ServiceName to the machine name is incorrect.

No such property as SiteName

Continue cannot re-start a stopped service only a paused one.

ExecuteCommand is used to fire a custom command on the service.

**Question: 243**

You are developing an application to perform mathematical calculations. You develop a class named CalculationValues. You write a procedure named PerformCalculation that operates on an instance of the class. You need to ensure that the user interface of the application continues to respond while calculations are being performed. You need to write a code segment that calls the PerformCalculation procedure to achieve this goal.

Which code segment should you use?

A. Private Sub PerformCalculation()...End Sub Private Sub DoWork()

Dim myValues As New CalculationValues()

Dim newThread As New Thread( \_

New ThreadStart(AddressOf PerformCalculation))

newThread.Start(myValues)

End Sub

B. Private Sub PerformCalculation()...End Sub Private Sub DoWork()

Dim myValues As New CalculationValues()

Dim delStart As New ThreadStart( \_AddressOf PerformCalculation)

Dim newThread As New Thread(delStart)If newThread.IsAlive

ThennewThread.Start(myValues)

End If

End Sub

C. Private Sub PerformCalculation ( \_ByVal values As CalculationValues)...End Sub

Private Sub DoWork()

Dim myValues As New CalculationValues()

Application.DoEvents()

PerformCalculation(myValues)

Application.DoEvents()

End Sub

D. Private Sub PerformCalculation ( \_ByVal values As Object)...End Sub Private Sub

DoWork()

```

Dim myValues As New CalculationValues()
Dim newThread As New Thread(_
New ParameterizedThreadStart(_AddressOf PerformCalculation))
newThread.Start(myValues)
End Sub

```

**Answer: D**

**Explanation:**

It is a requirement that the UI continues to respond, hence PerformCalculation should execute in a separate thread. PerformCalculation requires a parameter hence you should use the ParameterizedThreadStart delegate.  
A& B attempt to supply a parameter to the ThreadStart delegate. This is not possible.  
C Does not run in a new thread and hence may leave the UI unresponsive.

**Question: 244**

You are developing a method that searches a string for a substring. The method will be localized to Italy.

Your method accepts the following parameters: The string to be searched, which is named SearchListThe string for which to search, which is named SearchValue You need to write the code. Which code segment should you use?

- A. Return SearchList.IndexOf(SearchValue)
- B. Dim objComparer As CompareInfo = \_  
New CultureInfo("it-IT").CompareInfoReturn objComparer.Compare(SearchList, SearchValue)
- C. Dim objComparer As CompareInfo = \_  
New CultureInfo("it-IT").CompareInfoIf SearchList.IndexOf(SearchValue) > 0 Then  
Return TrueElse  
Return FalseEnd If
- D. Dim objComparer As CompareInfo = \_  
New CultureInfo("it-IT").CompareInfoIf objComparer.IndexOf(SearchList, SearchValue) > 0 Then  
Return TrueElse  
Return FalseEnd If

**Answer: D**

**Question: 245**

You are creating an application that lists processes on remote computers. The application requires a method that performs the following tasks: Accept the remote computer name as a string parameter named strComputer.Return an ArrayList object that contains the names of all processes that are running on that computer. You need to write a code segment that retrieves the name of each process that is running on the remote computer and adds the name to the ArrayList object. Which code segment should you use?

```

A. Dim al As New ArrayList()
Dim procs As Process() = _ Process.GetProcessesByName(strComputer)
Dim proc As ProcessFor Each proc In procs
al.Add(proc)
Next
B. Dim al As New ArrayList()
Dim procs As Process() = Process.GetProcesses(strComputer)
Dim proc As ProcessFor Each proc In procs
al.Add(proc)
Next
C. Dim al As New ArrayList()
Dim procs As Process() = _ Process.GetProcessesByName(strComputer)
Dim proc As ProcessFor Each proc In procs
al.Add(proc.ProcessName)
Next
D. Dim al As New ArrayList()
Dim procs As Process() = Process.GetProcesses(strComputer)
Dim proc As ProcessFor Each proc In procs
al.Add(proc.ProcessName)
Next

```

**Answer: D**

**Explanation:**

Call Processes.GetProcesses() supplying the name of the computer and then iterate through the returned collection of processes adding the process name to the arraylist.

A & C use GetProcessByName() and return processes on the current computer only.

B adds the entire process to the arraylist rather than just the process name.

**Question: 246**

You are writing a method that returns an ArrayList named al. You need to ensure that changes to the ArrayList are performed in a thread-safe manner. Which code segment should you use?

```

A. Dim al As ArrayList = New ArrayList()
SyncLock
al.SyncRoot
Return al
End SyncLock
B. Dim al As ArrayList = New ArrayList()
SyncLock
al.SyncRoot.GetType()
Return al
End SyncLock
C. Dim al As ArrayList = New ArrayList()
Monitor.Enter(al)
Monitor.Exit(al)

```

```
Return al
D. Dim al As ArrayList = New ArrayList()
Dim sync_al as ArrayList = ArrayList.Synchronized(al)
Return sync_al
```

**Answer: D**

**Explanation:**

A & C the lock will be released when the method returns.  
B Does not lock the arraylist but attempts to lock its type.

**Question: 247**

You need to write a multicast delegate that accepts a DateTime argument. Which code segment should you use?

- A. Public Delegate Function PowerDeviceOn( \_  
ByVal result As Boolean, \_  
ByVal autoPowerOff As DateTime) \_  
As Integer
- B. Public Delegate Function PowerDeviceOn( \_  
ByVal sender As Object, \_  
ByVal autoPowerOff As EventArgs) \_  
As Boolean
- C. Public Delegate Sub PowerDeviceOn( \_  
ByVal autoPowerOff As DateTime)
- D. Public Delegate Function PowerDeviceOn( \_  
ByVal autoPowerOff As DateTime) \_  
As Boolean

**Answer: C**

**Explanation:**

A & B the delegates do not accept an argument of type DateTime  
D The question does not explicitly mention a return type. Also with multicasting only the return value of the last method called as part of a multicast chain is returned. Hence return values do not tend to be very useful as far as multicasting is concerned.

**Question: 248**

You are developing a server application that will transmit sensitive information on a network. You create an X509Certificate object named certificate and a TcpClient object named client. You need to create an SslStream to communicate by using the Transport Layer Security 1.0 protocol. Which code segment should you use?

- A. Dim objSSL As New  
SslStream(client.GetStream)objSSL.AuthenticateAsServer(certificate, False, \_  
SslProtocols.None, True)
- B. Dim objSSL As New

```
SslStream(client.GetStream)objSSL.AuthenticateAsServer(certificate, False, _
SslProtocols.Ssl3, True)
C. Dim objSSL As New
SslStream(client.GetStream)objSSL.AuthenticateAsServer(certificate, False, _
SslProtocols.Ssl2, True)
D. Dim objSSL As New
SslStream(client.GetStream)objSSL.AuthenticateAsServer(certificate, False, _
SslProtocols.Tls, True)
```

**Answer: D**

**Question: 249**

You are testing a method that examines a running process. This method returns an ArrayList containing the name and full path of all modules that are loaded by the process.

You need to list the modules loaded by a process named C:\TestApps\Process1.exe.

Which code segment should you use?

```
A. Dim ar As New ArrayList()
Dim procs As Process()
Dim modules As ProcessModuleCollectionprocs = Process.GetProcesses("Process1")If
procs.Length > 0 Thenmodules = procs(0).Modules
For Each pm As ProcessModule In Modules
ar.Add(pm.ModuleName)
Next
End If
B. Dim ar As New ArrayList()
Dim procs As Process()
Dim modules As ProcessModuleCollectionprocs =
Process.GetProcesses("C:\TestApps\Process1.exe")If procs.Length > 0 Thenmodules =
procs(0).Modules
For Each pm As ProcessModule In Modules
ar.Add(pm.ModuleName)
Next
End If
C. Dim ar As New ArrayList()
Dim procs As Process()
Dim modules As ProcessModuleCollectionprocs =
Process.GetProcessesByName("Process1")If procs.Length > 0 Thenmodules =
procs(0).Modules
For Each pm As ProcessModule In Modules
ar.Add(pm.FileName)
Next
End If
D. Dim ar As New ArrayList()
Dim procs As Process()
Dim modules As ProcessModuleCollectionprocs =
```

```

_Process.GetProcessesByName("C:\TestApps\Process1.exe")If procs.Length > 0
Thenmodules = procs(0).Modules
For Each pm As ProcessModule In Modules
ar.Add(pm.FileName)
Next
End If

```

**Answer: C**

**Explanation:**

Process.GetProcessesByName() should be used to return all the processes that match a process name. The modules collection exposes all the modules loaded by the process and can be added to an ArrayList.

A & B GetProcesses() accepts a computer name for retrieving the processes on a remote computer. GetProcessesByName() should be used to return processes by their name.

D the path of the process is not part of the process name.

**Question: 250**

You need to write a code segment that transfers the contents of a byte array named dataToSend by using a NetworkStream object named netStream. You need to use a cache of size 8,192 bytes. Which code segment should you use?

- A. Dim memStream As New MemoryStream(8192)memStream.Write(dataToSend, 0, \_CType(netStream.Length, Integer))
- B. Dim memStream As New MemoryStream(8192)netStream.Write(dataToSend, 0, \_CType(memStream.Length, Integer))
- C. Dim bufStream As New BufferedStream(netStream, 8192)bufStream.Write(dataToSend, 0, dataToSend.Length)
- D. Dim bufStream As New BufferedStream(netStream)bufStream.Write(dataToSend, 0, 8192)

**Answer: C**

**Explanation:**

To send data using a cache it is necessary to use a BufferedStream.

The BufferedStream should be created with the cache size of 8192 bytes.

A & B do not employ caching.

D does not correctly initialise the BufferedStream to have a cache size of 8192 bytes.

**Question: 251**

You are creating an undo buffer that stores data modifications. You need to ensure that the undo functionality undoes the most recent data modifications first. You also need to ensure that the undo buffer permits the storage of strings only. Which code segment should you use?

- A. Dim undoBuffer As New Stack(Of String)
- B. Dim undoBuffer As New Stack()
- C. Dim undoBuffer As New Queue(Of String)

D. Dim undoBuffer As New Queue()

**Answer: A**

**Explanation:**

A Stack caters for a last in first out scenario similar to what is required in an undo buffer. By using Generics you can force a strongly typed collection that takes strings only.

B is not strongly typed for strings, it will take any type of object.

C & D Queue is a First in First out collection, it is not appropriate in this instance.

**Question: 252**

You are loading a new assembly into an application. You need to override the default evidence for the assembly. You require the common language runtime (CLR) to grant the assembly a permission set, as if the assembly were loaded from the local intranet zone.

You need to build the evidence collection. Which code segment should you use?

- A. Dim objEvidence As New Evidence( \_  
Assembly.GetExecutingAssembly.Evidence
- B. Dim objEvidence As New EvidenceobjEvidence.AddAssembly( \_  
New Zone(SecurityZone.Intranet))
- C. Dim objEvidence As New EvidenceobjEvidence.AddHost( \_  
New Zone(SecurityZone.Intranet))
- D. Dim objEvidence As New Evidence( \_  
AppDomain.CurrentDomain.Evidence)

**Answer: C**

**Explanation:**

Use the evidence.AddHost method to add Zone evidence.

A simply gets the evidence of the Executing Assembly and assigns it to a new object, the question explicitly wants Intranet zone evidence.

B Adds assembly evidence, the question asks for host evidence because it is concerned with where the assembly was loaded from.

D does not create an Evidence object with Intranet zone evidence.

**Question: 253**

You are writing code for user authentication and authorization. The username, password, and roles are stored in your application data store.

You need to establish a user security context that will be used for authorization checks such as IsInRole. You write the following code segment to authorize the user.

```
If TestPassword(UserName, Password) = False Then
Throw New Exception("Could not authenticate user")
End If
```

```
Dim RolesArray() As String = LookUpUserRoles(UserName)
```

You need to complete this code so that it establishes the user security context. Which code segment should you use?

A. Dim objID As New GenericIdentity(UserName)  
 Dim objUser As New GenericPrincipal(objID, RolesArray)  
 Thread.CurrentPrincipal = objUser

B. Dim objID As New WindowsIdentity(UserName)  
 Dim objUser As New WindowsPrincipal(objID)  
 Thread.CurrentPrincipal = objUser

C. Dim objNT As New NTAccount(UserName)  
 Dim objID As New GenericIdentity(objNT.Value)  
 Dim objUser As New GenericPrincipal(objID, RolesArray)  
 Thread.CurrentPrincipal = objUser

D. Dim objToken As IntPtr = IntPtr.Zero  
 objToken = LogonUserUsingInterop(UserName, EncryptedPassword)  
 Dim objContext As WindowsImpersonationContext =\_  
 WindowsIdentity.Impersonate(objToken)

**Answer: A**

**Explanation:**

Because the application storing the credentials, the GenericIdentity & GenericPrincipal classes should be used instead of the WindowsIdentity\Principal classes.

B uses WindowsIdentity & WindowsPrincipal

C incorrectly uses NTAccount to initialise a GenericPrincipal. GenericPrincipal requires an implementation of IIdentity.

D the WindowsIdentity.Impersonate() is used for running code in the context of another user. Impersonation is not what is required.

**Question: 254**

You write the following code segment to call a function from the Win32 Application Programming Interface (API) by using platform invoke.

```
Dim PersonName as String = "N?el"
Dim Msg as String = "Welcome " + PersonName + " to club " & "!"
Dim r As Boolean= User32API.MessageBox(0, Msg, PersonName, 0)
```

You need to define a method prototype that can best marshal the string data. Which code segment should you use?

A. <DllImport("user32", CharSet:=CharSet.Ansi)> \_Public Function MessageBox(ByVal hWnd As IntPtr, \_ByVal text As String, ByVal caption As String, \_ByVal t As UInt32) As BooleanEnd Function

B. <DllImport("user32", EntryPoint:="MessageBoxA", \_CharSet:=CharSet.Ansi)> \_Public Function MessageBox(ByVal hWnd As IntPtr, \_<MarshalAs(UnmanagedType.LPWStr)> ByVal text As String, \_<MarshalAs(UnmanagedType.LPWStr)> ByVal caption As String, \_ByVal t As UInt32) As BooleanEnd Function

C. <DllImport("user32", CharSet:=CharSet.Unicode)> \_Public Function

```

MessageBox(ByVal hWnd As Int32, _ByVal text As String, ByVal caption As String,
_ByVal t As UInt32) As BooleanEnd Function
D. DllImport("user32", EntryPoint:="MessageBoxA", _CharSet:=CharSet.Unicode)>
_Public Function MessageBox(ByVal hWnd As Int32,
_<MarshalAs(UnmanagedType.LPWStr)> ByVal text As String,
_<MarshalAs(UnmanagedType.LPWStr)> ByVal caption As String, _ByVal t As
UInt32) As BooleanEnd Function

```

**Answer: C**

### Question: 255

You need to create a dynamic assembly named MyAssembly. You also need to save the assembly to disk. Which code segment should you use?

- A. Dim objAssembly As New AssemblyName(objAssembly.Name = "MyAssembly")Dim objBuilder As AssemblyBuilder = \_AppDomain.CurrentDomain.DefineDynamicAssembly( \_objAssembly, AssemblyBuilderAccess.Run)objBuilder.Save("MyAssembly.dll")
- B. Dim objAssembly As New AssemblyName(objAssembly.Name = "MyAssembly")Dim objBuilder As AssemblyBuilder = \_AppDomain.CurrentDomain.DefineDynamicAssembly( \_objAssembly, AssemblyBuilderAccess.Save)objBuilder.Save("MyAssembly.dll")
- C. Dim objAssembly As New AssemblyName(objAssembly.Name = "MyAssembly")Dim objBuilder As AssemblyBuilder = \_AppDomain.CurrentDomain.DefineDynamicAssembly( \_objAssembly, AssemblyBuilderAccess.RunAndSave)objBuilder.Save("MyAssembly.dll")
- D. Dim objAssembly As New AssemblyName(objAssembly.Name = "MyAssembly")Dim objBuilder As AssemblyBuilder = \_AppDomain.CurrentDomain.DefineDynamicAssembly( \_objAssembly, AssemblyBuilderAccess.Save)objBuilder.Save("c:\MyAssembly.dll")

**Answer: B**

### Explanation:

Create an AssemblyName object and use it to construct an AssemblyBuilder with save privilege. Finally call the Save method on the AssemblyBuilder to write the assembly to disk.

A Creates an assembly that does not have the privilege to save to disk.

C does not provide a name the assembly

D attempts to define a physical file location, this is not compatible with AssemblyBuilder.Save

### Question: 256

You create a class library that is used by applications in three departments of Company.com. The library contains a Department class with the following definition.

```

Public Class Department
Public name As String
Public manager As String
End Class

```

Each application uses a custom configuration section to store department-specific values in the application configuration file as shown in the following code.

```
<Department>
<name>Hardware</name>
<manager>Company</manager>
</Department>
```

You need to write a code segment that creates a Department object instance by using the field values retrieved from the application configuration file. Which code segment should you use?

A. Public Class deptElement  
Inherits ConfigurationElement  
Protected Overrides Sub DeserializeElement( \_  
ByVal reader As XmlReader, \_  
ByVal serializeCollectionKey As Boolean)  
Dim dept As Department = New Department()  
dept.name = ConfigurationManager.AppSettings("name")  
dept.manager = \_  
ConfigurationManager.AppSettings("manager")  
End Sub  
End Class

B. Public Class deptElement  
Inherits ConfigurationElement  
Protected Overrides Sub DeserializeElement( \_  
ByVal reader As XmlReader, \_  
ByVal serializeCollectionKey As Boolean)  
Dim dept As Department = New Department()  
dept.name = reader.GetAttribute("name")  
dept.manager = reader.GetAttribute("manager")  
End Sub  
End Class

C. Public Class deptHandler  
Implements IConfigurationSectionHandler  
Public Function Create(ByVal parent As Object, \_  
ByVal configContext As Object, \_  
ByVal section As System.Xml.XmlNode) As Object \_  
Implements IConfigurationSectionHandler.Create  
Dim dept As Department = new Department()  
dept.name = section.SelectSingleNode("name").InnerText  
dept.manager = \_  
section.SelectSingleNode("manager").InnerText  
Return dept  
End Function  
End Class

D. Public Class deptHandler  
Implements IConfigurationSectionHandler  
Public Function Create(ByVal parent As Object, \_

```

ByVal configContext As Object, _
ByVal section As System.Xml.XmlNode) As Object _
Implements IConfigurationSectionHandler.Create
Dim dept As Department = new Department()
dept.name = section.Attributes("name").Value
dept.manager = section.Attributes("manager").Value
Return dept
End Function
End Class

```

**Answer: C**

### Question: 257

You create the definition for a Vehicle class by using the following code segment.

```

Public Class Vehicle
<XmlAttribute(AttributeName:="category")> _
Public vehicleType As String
Public model As String
<XmlIgnore> _
Public year As Integer
<XmlElement(ElementName:="mileage")> _
Public miles As Integer
Public condition As ConditionType
Public Sub New()
End Sub
Public Enum ConditionType
<XmlEnum("Poor")> BelowAverage
<XmlEnum("Good")> Average
<XmlEnum("Excellent")> AboveAverage
End Enum
End Class

```

You create an instance of the Vehicle class. You populate the public fields of the Vehicle class instance as shown in the following table:

### Member Value

```

vehicleType car
model racer
year 2002
miles 15000
condition AboveAverage

```

You need to identify the XML block that is produced when this Vehicle class instance is serialized.

Which block of XML represents the output of serializing the Vehicle instance?

A. <?xml version="1.0" encoding="utf-8"?>  
<Vehicle

```
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
vehicleType="car">
<model>racer</model>
<miles>15000</miles>
<condition>AboveAverage</condition>
</Vehicle>
```

B. <?xml version="1.0" encoding="utf-8"?>

```
<Vehicle
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
category="car">
<model>racer</model>
<mileage>15000</mileage>
<condition>Excellent</condition>
</Vehicle>
```

C. <?xml version="1.0" encoding="utf-8"?>

```
<Vehicle
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
category="car">
<model>racer</model>
<mileage>15000</mileage>
<conditionType>Excellent</conditionType>
</Vehicle>
```

D. <?xml version="1.0" encoding="utf-8"?>

```
<Vehicle
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
<category>car</category>
<model>racer</model>
<mileage>15000</mileage>
<condition>Excellent</condition>
</Vehicle>
```

**Answer: B**

**Explanation:**

The XML produced in B matches the class definition provided in the question.

Category is declared to be an attribute of the Vehicle element, this is not the case in answer A and D.

During XML Serialization by default the user type variables are mapped to XML elements. In the case of answer C, the type itself has been mapped instead of the instance variable.

**Question: 258**

You are writing a method to compress an array of bytes. The array is passed to the method in a

parameter named document. You need to compress the incoming array of bytes and return the result as an array of bytes. Which code segment should you use?

A. Dim objStream As New MemoryStream(document)  
Dim objDeflate As New DeflateStream(objStream, CompressionMode.Compress)  
Dim result(document.Length) As Byteobj  
Deflate.Write(result, 0, result.Length)Return result

B. Dim objStream As New MemoryStream(document)  
Dim objDeflate As New DeflateStream(objStream, CompressionMode.Compress)obj  
Deflate.Write(document, 0, document.Length)obj  
Deflate.Close()Return objStream.ToArray

C. Dim objStream As New MemoryStream()  
Dim objDeflate As New DeflateStream(objStream, CompressionMode.Compress)obj  
Deflate.Write(document, 0, document.Length)obj  
Deflate.Close()Return objStream.ToArray

D. Dim objStream As New MemoryStream()  
Dim objDeflate As New DeflateStream(objStream, CompressionMode.Compress)  
Dim outStream As New MemoryStreamDim b As IntegerWhile (b =  
objDeflate.ReadByte)  
outStream.WriteByte(CByte(b))  
End While  
Return outStream.ToArray

**Answer: C**

**Explanation:**

The document is compressed and written to a new MemoryStream using the Deflate class. Finally the compressed data can be returned as an array of bytes using the ToArray method of the MemoryStream.

A does not compress and write the document, instead it is compressing and writing an empty array

B & D are reading and writing to the same document.

**Question: 259**

You are creating an application that retrieves values from a custom section of the application configuration file. The custom section uses XML as shown in the following block.

```
<ProjectSection name="ProjectCompany">
<role name="administrator" />
<role name="manager" />
<role name="support" />
</ProjectSection>
```

You need to write a code segment to define a class named Role. You need to ensure that the Role class is initialized with values that are retrieved from the custom section of the configuration file. Which code segment should you use?

A. Public Class RoleInherits ConfigurationElementFriend \_ElementName As String =

```

"name"
<ConfigurationProperty("role")> _
Public ReadOnly Property Name() As String
Get
Return CType(Me("role"), String)
End Get
End Property
End Class

B. Public Class Role
Inherits ConfigurationElement
Friend _ElementName As String = "role"
<ConfigurationProperty("name", IsRequired:=True)> _
Public ReadOnly Property Name() As String
Get
Return CType(Me("name"), String)
End Get
End Property
End Class

C. Public Class Role
Inherits ConfigurationElement
Friend _ElementName As String = "role"
Private _name As String
<ConfigurationProperty("name")> _
Public ReadOnly Property Name() As String
Get
Return _name
End Get
End Property
End Class

D. Public Class Role
Inherits ConfigurationElement
Friend _ElementName As String = "name"
Private _name As String
<ConfigurationProperty("role", IsRequired:=True)> _
Public ReadOnly Property Name() As String
Get
Return _name
End Get
End Property
End Class

```

**Answer: B**

**Question: 260**

You are creating a class to compare a specially-formatted string. The default collation comparisons do not apply. You need to implement the IComparable(Of String) interface.

Which code segment should you use?

- A. Public Class Person  
Implements IComparable(Of String)Public Function CompareTo(ByVal other As String)  
As \_Integer Implements IComparable(Of String).CompareTo...End Function  
End Class
- B. Public Class Person  
Implements IComparable(Of String)Public Function CompareTo(ByVal other As Object)  
As \_Integer Implements IComparable(Of String).CompareTo...End Function  
End Class
- C. Public Class Person  
Implements IComparable(Of String)Public Function CompareTo(ByVal other As String)  
\_As Boolean Implements IComparable(Of String).CompareTo...End Function  
End Class
- D. Public Class Person  
Implements IComparable(Of String)Public Function CompareTo(ByVal other As Object)  
\_As Boolean Implements IComparable(Of String).CompareTo...End Function  
End Class

**Answer: A**

**Question: 261**

You write the following custom exception class named CustomException.

```
Public Class CustomException
Inherits ApplicationException
Public Shared COR_E_ARGUMENT As Int32 = &H80070057
Public Sub New(ByVal strMessage As String)
MyBase.New(strMessage)
HResult = COR_E_ARGUMENT
End SubEnd Class
```

You need to write a code segment that will use the CustomException class to immediately return control to the COM caller. You also need to ensure that the caller has access to the error code.

Which code segment should you use?

- A. Return Marshal.GetExceptionForHR( \_  
CustomException.COR\_E\_ARGUMENT)
- B. Return CustomException.COR\_E\_ARGUMENT
- C. Marshal.ThrowExceptionForHR( \_  
CustomException.COR\_E\_ARGUMENT)
- D. Throw New CustomException("Argument is out of bounds")

**Answer: D**

**Question: 262**

You develop a service application named PollingService that periodically calls long-running procedures. These procedures are called from the DoWork method.

You use the following service application code:

```
Partial Class PollingService Inherits ServiceBase
```

```
Dim blnExit As Boolean = False Protected Overrides Sub OnStart(ByVal args() As String)
```

```
Do
```

```
DoWork()
```

```
Loop While Not blnExit
```

```
End Sub
```

```
Protected Overrides Sub OnStop()
```

```
blnExit = True
```

```
End Sub
```

```
Private Sub DoWork()
```

```
End SubEnd Class
```

When you attempt to start the service, you receive the following error message: Could not start the PollingService service on the local computer. Error 1053: The service did not respond to the start or control request in a timely fashion. You need to modify the service application code so that the service starts properly. What should you do?

- A. Move the loop code into the constructor of the service class from the OnStart method.
- B. Drag a timer component onto the design surface of the service. Move the calls to the longrunning procedure from the OnStart method into the Tick event procedure of the timer, set the Enabled property of the timer to True, and call the Start method of the timer in the OnStart method.
- C. Add a class-level System.Timers.Timer variable to the service class code. Move the call to the DoWork method into the Elapsed event procedure of the timer, set the Enabled property of the timer to True, and call the Start method of the timer in the OnStart method.
- D. Move the loop code from the OnStart method into the DoWork method.

**Answer: C**

### Question: 263

You are creating a new security policy for an application domain. You write the following lines of code.

```
Dim objPolicy As PolicyLevel = PolicyLevel.CreateAppDomainLevelDim
```

```
noTrustStatement As New PolicyStatement(_
objPolicy.GetNamedPermissionSet("Nothing"))
```

```
Dim fullTrustStatement As New PolicyStatement(_
objPolicy.GetNamedPermissionSet("FullTrust"))
```

You need to arrange code groups for the policy so that loaded assemblies default to the Nothing permission set. If the assembly originates from a trusted zone, the security policy must grant the assembly the FullTrust permission set. Which code segment should you use?

```
A. Dim objGroup1 As CodeGroup = New FirstMatchCodeGroup(_
New ZoneMembershipCondition(SecurityZone.Trusted), _
fullTrustStatement)
```

```
Dim objGroup2 As CodeGroup = New UnionCodeGroup(_
New AllMembershipCondition, noTrustStatement)
```

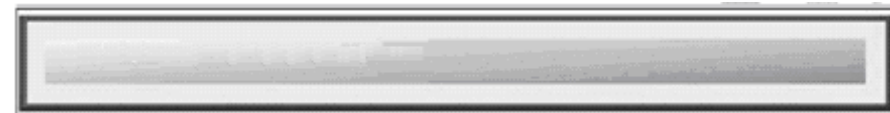
B. Dim objGroup1 As CodeGroup = New FirstMatchCodeGroup( \_  
 New AllMembershipCondition, noTrustStatement)  
 Dim objGroup2 As CodeGroup = New UnionCodeGroup( \_  
 New ZoneMembershipCondition(SecurityZone.Trusted), \_  
 fullTrustStatement)  
 C. Dim objGroup As CodeGroup = New UnionCodeGroup( \_  
 New ZoneMembershipCondition(SecurityZone.Trusted), \_  
 fullTrustStatement)  
 D. Dim objGroup As CodeGroup = New FirstMatchCodeGroup( \_  
 New ZoneMembershipCondition(SecurityZone.Trusted), \_  
 fullTrustStatement)

**Answer: B**

**Question: 264**

You are developing a utility screen for a new client application. The utility screen displays a thermometer that conveys the current status of processes being carried out by the application. You need to draw a rectangle on the screen to serve as the background of the thermometer as shown in the exhibit. The rectangle must be filled with gradient shading. Which code segment should you choose?

Exhibit:



A. Dim objRect As New Rectangle(10, 10, 450, 25)  
 Dim objBrush As New LinearGradientBrush( \_objRect, Color.AliceBlue, Color.CornflowerBlue, \_LinearGradientMode.ForwardDiagonal)  
 Dim objPen As New Pen(objBrush)  
 Dim g As Graphics = myForm.CreateGraphicsg.DrawRectangle(objPen, objRect)  
 B. Dim objRect As New Rectangle(10, 10, 450, 25)  
 Dim objBrush As New LinearGradientBrush( \_objRect, Color.AliceBlue, Color.CornflowerBlue, \_LinearGradientMode.ForwardDiagonal)  
 Dim objPen As New Pen(objBrush)  
 Dim g As Graphics = myForm.CreateGraphicsg.FillRectangle(objBrush, objRect)  
 C. Dim objRect As New RectangleF(10.0F, 10.0F, 450.0F, 25.0F)  
 Dim points() As System.Drawing.Point = \_  
 {New Point(0, 0), New Point(110, 145)}  
 Dim objBrush As New LinearGradientBrush( \_objRect, Color.AliceBlue, Color.CornflowerBlue, \_LinearGradientMode.ForwardDiagonal)  
 Dim objPen As New Pen(objBrush)  
 Dim g As Graphics = myForm.CreateGraphicsg.DrawPolygon(objPen, points)  
 D. Dim objRect As New Rectangle(10, 10, 450, 25)  
 Dim objBrush As New SolidBrush(Color.AliceBlue)  
 Dim objPen As New Pen(objBrush)

Dim g As Graphics = myForm.CreateGraphicsg.DrawRectangle(objPen, objRect)

**Answer: B**

**Explanation:**

Create a LinearGradientBrush and supply to the FillRectangle() method of the graphics object.

A DrawRectangle() will draw the outline of a rectangle without filling it.

C draws an unfilled Polygon..

D Uses a SolidBrush and will not achieve the desired gradient fill

**Question: 265**

You need to write a code segment that transfers the first 80 bytes from a stream variable named stream1 into a new byte array named byteArray. You also need to ensure that the code segment assigns the number of bytes that are transferred to an integer variable named bytesTransferred. Which code segment should you use?

A. bytesTransferred = stream1.Read(byteArray, 0, 80)

B. For i As Integer = 1 To 80

stream1.WriteByte(byteArray(i))

bytesTransferred = i

If Not stream1.CanWrite Then

Exit For

End If

Next

C. While bytesTransferred < 80

stream1.Seek(1, SeekOrigin.Current)

byteArray(bytesTransferred) = \_

Convert.ToByte(stream1.ReadByte())bytesTransferred += 1End While

D. stream1.Write(byteArray, 0, 80)bytesTransferred = byteArray.Length

**Answer: A**

**Explanation:**

The Read() method accepts a byte array and the start position and number of bytes to read as parameters.

B & D The question indicates that data should be read from the stream not written to it.

C it is unnecessary to attempt to read byte by byte, the Read() method provides a very efficient way of reading into a byte array.

**Question: 266**

You are developing an application to assist the user in conducting electronic surveys. The survey consists of 25 true-or-false questions. You need to perform the following tasks:

Initialize each answer to true.Minimize the amount of memory used by each survey.

Which storage option should you choose?

A. Dim answers As New BitVector32(1)

- B. Dim answers As New BitVector32(-1)
- C. Dim answers As New BitArray(1)
- D. Dim answers As New BitArray(-1)

**Answer: B**

**Explanation:**

C & D BitVector32 is more efficient than a BitArray when 32 or less binary flags are required. Primarily because it is a value type.

Note: we are not sure why B is preferred to A.

**Question: 267**

You are testing a newly developed method named PersistToDB. This method accepts a parameter of type EventLogEntry. This method does not return a value. You need to create a code segment that helps you to test the method. The code segment must read entries from the application log of local computers and then pass the entries on to the PersistToDB method. The

code block must pass only events of type Error or Warning from the source MySource to the PersistToDB method.

Which code segment should you use?

- A. Dim myLog As New EventLog("Application", ".")  
For Each entry As EventLogEntry In myLog.Entries  
If entry.Source = "MySource" Then  
PersistToDB(entry)  
End If  
Next
- B. Dim myLog as New EventLog("Application", ".")  
myLog.Source = "MySource"  
For Each entry As EventLogEntry In myLog.Entries  
If entry.EntryType = (EventLogEntryType.Error And \_  
EventLogEntryType.Warning) Then  
PersistToDB(entry)  
End If  
Next
- C. Dim myLog as New EventLog("Application", ".")  
For Each entry As EventLogEntry In myLog.Entries  
If entry.Source = "MySource" Then  
If (entry.EntryType = EventLogEntryType.Error) Or \_  
(entry.EntryType = EventLogEntryType.Warning) Then  
PersistToDB(entry)  
End If  
End If  
Next
- D. Dim myLog as New EventLog("Application", ".")  
myLog.Source = "MySource"  
For Each entry As EventLogEntry In myLog.Entries  
If (entry.EntryType = EventLogEntryType.Error) Or \_

```
(entry.EntryType = EventLogEntryType.Warning) Then
PersistToDB(entry)
End If
Next
```

**Answer: C**

**Explanation:**

It is necessary to create a new Application EventLog, iterate over all the EventLogEntries and call the PersistToDB method if the entry is a warning or error and the source is MySource.

A will PersistToDB irrespective of the type of log entry. The question explicitly states only warnings and errors should be persisted.

B features an incorrect test for warnings and errors.

D&B do not ensure that only MySource entries are persisted. Instead they overwrite the source.

**Question: 268**

You are writing a method to compress an array of bytes. The bytes to be compressed are passed to the method in a parameter named document.

You need to compress the contents of the incoming parameter.

Which code segment should you use?

A. Dim inStream As New MemoryStream(document)  
Dim zipStream As New GZipStream( \_inStream, CompressionMode.Compress)  
Dim result(document.Length) As BytezipStream.Write(result, 0, result.Length)Return result

B. Dim objStream As New MemoryStream(document)  
Dim zipStream As New GZipStream( \_  
objStream, CompressionMode.Compress)zipStream.Write(document, 0,  
document.Length)zipStream.Close()Return objStream.ToArray

C. Dim outStream As New MemoryStreamDim zipStream As New GZipStream(  
\_outStream, CompressionMode.Compress)zipStream.Write(document, 0,  
document.Length)zipStream.Close()Return outStream.ToArray

D. Dim objStream As New MemoryStream(document)  
Dim zipStream As New GZipStream( \_objStream, CompressionMode.Compress)  
Dim outStream As New MemoryStreamDim b As IntegerWhile (b =  
zipStream.ReadByte)outStream.WriteByte(CByte(b))  
End WhileReturn outStream.ToArray

**Answer: C**

**Question: 269**

You need to create a class definition that is interoperable along with COM. You need to ensure that COM applications can create instances of the class and can call the GetAddress method.

Which code segment should you use?

A. Public Class Customer  
Private m\_AddressString As String

```

Public Sub New(ByVal Address As String)
m_AddressString = Address
End Sub
Public Function GetAddress() As String
Return m_AddressString
End Function
End Class
B. Public Class Customer
Shared m_AddressString As String
Public Sub New()
End Sub
Public Shared Function GetAddress() As String
Return m_AddressString
End Function
End Class
C. Public Class Customer
Private m_AddressString As String
Public Sub New()
End Sub
Public Function GetAddress() As String
Return m_AddressString
End Function
End Class
D. Public Class Customer
Private m_AddressString As String
Public Sub New()
End Sub
Private Function GetAddress() As String
Return m_AddressString
End Function
End Class

```

**Answer: C**

**Explanation:**

The class should be declared with a parameter less constructor and the getAddress() method should be public.

A uses a constructor with Parameters.

B uses static members that are not supported in COM

D the method GetAddress() must be public to be accessible by COM.

**Question: 270**

You need to generate a report that lists language codes and region codes.  
Which code segment should you use?

A. For Each objCulture As CultureInfo In

```

_CultureInfo.GetCultures(CultureTypes.SpecificCultures)
...Next
B. Dim objCulture As New CultureInfo("")
Dim objTypes As CultureTypes = objCulture.CultureTypes
...
C. For Each objCulture As CultureInfo In
_CultureInfo.GetCultures(CultureTypes.NeutralCultures)
...Next
D. For Each objCulture As CultureInfo In
_CultureInfo.GetCultures(CultureTypes.ReplacementCultures)
...Next

```

**Answer: A**

**Explanation:**

CultureTypes.SpecificCultures will filter all language codes that are specific to a country\region.  
 B The CultureInfo object created is not associated with any cultures.  
 C will yield only neutral cultures, they will not be specific to a country\region.  
 D Replacement cultures are user-defined custom cultures.

**Question: 271**

You are creating a class named Age.  
 You need to ensure that the Age class is written such that collections of Age objects can be sorted. Which code segment should you use?

```

A. Public Class Age
 Public Value As Integer
 Public Function CompareTo(ByVal obj As Object) As Object
 If TypeOf obj Is Age Then
 Dim _age As Age = CType(obj, Age)
 Return Value.CompareTo(obj)
 End If
 Throw New ArgumentException("object not an Age")
 End Function
End Class
B. Public Class Age
 Public Value As Integer
 Public Function CompareTo(ByVal iValue As Integer) As Object
 Try
 Return Value.CompareTo(iValue)
 Catch
 Throw New ArgumentException ("object not an Age")
 End Try
 End Function
End Class
C. Public Class Age

```

```

Implements IComparable
Public Value As Integer
Public Function CompareTo(ByVal obj As Object) As Integer _
Implements IComparable.CompareTo
If TypeOf obj Is Age Then
Dim _age As Age = CType(obj, Age)
Return Value.CompareTo(_age.Value)
End If
Throw New ArgumentException("object not an Age")
End Function
End Class
D. Public Class Age
Implements IComparable
Public Value As Integer
Public Function CompareTo(ByVal obj As Object) As Integer _
Implements IComparable.CompareTo
Try
Return Value.CompareTo((CType(obj, Age)).Value)
Catch
Return -1
End Try
End Function
End Class

```

**Answer: C**

### **Question: 272**

You are testing a component that serializes the Meeting class instances so that they can be saved to the file system. The Meeting class has the following definition:

```

Public Class Meeting
Private title As String
Public roomNumber As Integer
Public invitees As String()
Public Sub New()
End Sub
Public Sub New(ByVal t As String)
title = t
End Sub
End Class

```

The component contains a procedure with the following code segment.

```

Dim myMeeting As New Meeting("Goals")
myMeeting.roomNumber = 1100
Dim attendees As String() = New String(1) {"Company", "Mary"}
myMeeting.invitees = attendees
Dim xs As New XmlSerializer(GetType(Meeting))
Dim writer As New StreamWriter("C:\Meeting.xml")

```

```
xs.Serialize(writer, myMeeting)
writer.Close()
```

You need to identify the XML block that is written to the C:\Meeting.xml file as a result of running this procedure. Which XML block represents the content that will be written to the C:\Meeting.xml file?

A. `<?xml version="1.0" encoding="utf-8"?>`  
`<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"`  
`xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">`  
`<title>Goals</title>`  
`<roomNumber>1100</roomNumber>`  
`<invitee>Company</invitee>`  
`<invitee>Mary</invitee>`  
`</Meeting>`

B. `<?xml version="1.0" encoding="utf-8"?>`  
`<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"`  
`xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">`  
`<roomNumber>1100</roomNumber>`  
`<invitees>`  
`<string>Company</string>`  
`<string>Mary</string>`  
`</invitees>`  
`</Meeting>`

C. `<?xml version="1.0" encoding="utf-8"?>`  
`<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"`  
`xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"`  
`title="Goals">`  
`<roomNumber>1100</roomNumber>`  
`<invitees>`  
`<string>Company</string>`  
`<string>Mary</string>`  
`</invitees>`  
`</Meeting>`

D. `<?xml version="1.0" encoding="utf-8"?>`  
`<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"`  
`xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">`  
`<roomNumber>1100</roomNumber>`  
`<invitees>`  
`<string>Company</string>`  
`</invitees>`  
`<invitees>`  
`<string>Mary</string>`  
`</invitees>`  
`</Meeting>`

**Answer: B**

**Explanation:**

A & C show title member in the XML. Title is a private member hence will not be serialized to XML.

D Shows multiple Invitees. There is only one object of type Invitees in the class definition.

**Question: 273**

You write the following code to implement the CompanyClass.MyMethod function.

```
Public Class NewClass
Public Function MyMethod(ByVal Arg As Integer) As Integer
Return Arg
End Function
End Class
```

You need to call the CompanyClass.MyMethod function dynamically from an unrelated class in your assembly. Which code segment should you use?

A. Dim objNewClass As New NewClassDim objType As Type =  
objNewClass.GetTypeDim objInfo As MethodInfo = \_  
objType.GetMethod("MyMethod")  
Dim objParams() As Object = {1}  
Dim i As Integer = \_  
DirectCast(objInfo.Invoke(Me, objParams), Integer)

B. Dim objNewClass As New NewClassDim objType As Type =  
objNewClass.GetTypeDim objInfo As MethodInfo = objType.GetMethod("MyMethod")  
Dim objParams() As Object = {1}  
Dim i As Integer = \_  
DirectCast(objInfo.Invoke(objNewClass, objParams), Integer)

C. Dim objNewClass As New NewClassDim objType As Type =  
objNewClass.GetTypeDim objInfo As MethodInfo = \_  
objType.GetMethod("NewClass.MyMethod")  
Dim objParams() As Object = {1}  
Dim i As Integer = \_  
DirectCast(objInfo.Invoke(objNewClass, objParams), Integer)

D. Dim objType As Type = Type.GetType("NewClass")  
Dim objInfo As MethodInfo = objType.GetMethod("MyMethod")  
Dim objParams() As Object = {1}  
Dim i As Integer = \_  
DirectCast(objInfo.Invoke(Me, objParams), Integer)

**Answer: B****Explanation:**

Use reflection to get MethodInfo object that corresponds to the MyMethod member function. Call the Invoke() method of MethodInfo

A & D the Invoke method requires the object that the method will fire upon if its an instance method. myClass should have been passed.

C the getMethod() does not require the classname .

**Question: 274**

You create a class library that contains the class hierarchy defined in the following code segment. (Line numbers are included for reference only.)

```
01 Public Class Group
02 Public Employees As Employee()
03 End Class
04
05 Public Class Employee
06 Public Name As String
07 End Class
08
09 Public Class Manager
10 Inherits Employee
11 Public Level As Integer
12 End Class
```

You create an instance of the Group class. You populate the fields of the instance. When you attempt to serialize the instance by using the Serialize method of the XmlSerializer class, you receive InvalidOperationException. You also receive the following error message: "There was an error generating the XML document."

You need to modify the code segment so that you can successfully serialize instances of the Group class by using the XmlSerializer class. You also need to ensure that the XML output contains an element for all public fields in the class hierarchy. What should you do?

A. Insert the following code between lines 1 and 2 of the code segment:

```
<XmlArrayItem(Type:=GetType(Employee))> _
<XmlArrayItem(Type:=GetType(Manager))> _
```

B. Insert the following code between lines 1 and 2 of the code segment:

```
<XmlElement(Type:=GetType(Employee))> _
```

C. Insert the following code between lines 1 and 2 of the code segment:

```
<XmlArray(ElementName:="Employees")> _
```

D. Insert the following code between lines 5 and 6 of the code segment:

```
<XmlElement(Type:=GetType(Employee))>
```

And

Insert the following code between lines 10 and 11 of the code segment:

```
<XmlElement(Type:=GetType(Manager))>
```

**Answer: A**

**Question: 275**

You need to write a code segment that performs the following tasks:

- \* Retrieves the name of each paused service.
- \* Passes the name to the Add method of Collection1.

Which code segment should you use?

A. ManagementObjectSearcher^ searcher =

```

gcnew ManagementObjectSearcher(
"Select * from Win32_Service where State = 'Paused'");
for each (ManagementObject^ svc in searcher->Get()) {
Collection1->Add(svc["DisplayName"]);
}
B. ManagementObjectSearcher^ searcher =
gcnew ManagementObjectSearcher(
"Select * from Win32_Service", "State = 'Paused'");
for each (ManagementObject^ svc in searcher->Get()) {
Collection1->Add(svc["DisplayName"]);
}
C. ManagementObjectSearcher^ searcher =
gcnew ManagementObjectSearcher(
"Select * from Win32_Service");
for each (ManagementObject^ svc in searcher->Get()) {
if ((String^) svc["State"] == "Paused") {
Collection1->Add(svc["DisplayName"]);
}}
D. ManagementObjectSearcher^ searcher =
gcnew ManagementObjectSearcher();
searcher->Scope = gcnew ManagementScope("Win32_Service");
for each (ManagementObject^ svc in searcher->Get()) {
if ((String^)svc["State"] == "Paused") {
Collection1->Add(svc["DisplayName"]);
}}

```

**Answer: A**

### Question: 276

You are developing an application that dynamically loads assemblies from an application directory.

You need to write a code segment that loads an assembly named Company1.dll into the current application domain. Which code segment should you use?

```

A. AppDomain^ domain = AppDomain::CurrentDomain;
String^ myPath = Path::Combine(domain->BaseDirectory, "Company1.dll");
Assembly^ assm = Assembly::LoadFrom(myPath);
B. AppDomain^ domain = AppDomain::CurrentDomain;
String^ myPath = Path::Combine(domain->BaseDirectory, "Company1 .dll");
Assembly^ assm = Assembly::Load(myPath);
C. AppDomain^ domain = AppDomain::CurrentDomain;
String^ myPath = Path::Combine(domain->DynamicDirectory, "Company1.dll");
Assembly^ assm = AppDomain::CurrentDomain::Load(myPath);
D. AppDomain^ domain = AppDomain::CurrentDomain;
Assembly^ assm = domain->GetData("Company1.dll");

```

**Answer: A**

**Explanation:**

The Assembly.LoadFrom() method can be called to dynamically load an assembly from file.  
B the Load method requires an AssemblyName object as a parameter.  
C it is not possible to use AppDomain.Load to load an assembly from file.  
D AppDomain.GetData gets information stored in the AppDomain for the specified assembly. It cannot load an assembly.

**Question: 277**

You are developing a class library. Portions of your code need to access system environment variables.  
You need to force a runtime SecurityException only when callers that are higher in the call stack do not have the necessary permissions.  
Which call method should you use?

- A. Set->Demand();
- B. Set->Assert();
- C. Set->PermitOnly();
- D. Set->Deny();

**Answer: A**

**Explanation:**

Demand forces all callers in the call stack to have the specified permission.  
PermitOnly will instruct the runtime to reduce the access by only allowing callers with the permissions explicitly stated and nothing else.  
Assert will ignore the permissions of callers and allow them indiscriminately.  
Deny will explicitly deny access if the caller has the specified permission.

**Question: 278**

You are writing a custom dictionary. The custom-dictionary class is named MyDictionary. You need to ensure that the dictionary is type safe.  
Which code segment should you use?

- A. class MyDictionary : Dictionary<string, string>
  - B. class MyDictionary : HashTable
  - C. class MyDictionary : IDictionary
  - D. class MyDictionary { ... }
- Dictionary<string, string> t = new Dictionary<string, string>();  
MyDictionary dictionary = (MyDictionary)t;

**Answer: A**

**Question: 279**

You are developing a method to hash data with the Secure Hash Algorithm. The data is passed

to your method as a byte array named message. You need to compute the hash of the incoming parameter by using SHA1. You also need to place the result into a byte array named hash. Which code segment should you use?

- A. `SHA1 ^sha = gcnew SHA1CryptoServiceProvider();  
array<Byte>^hash = nullptr;  
sha->TransformBlock(message, 0, message->Length, hash, 0);`
- B. `SHA1 ^sha = gcnew SHA1CryptoServiceProvider();  
array<Byte>^hash = BitConverter::GetBytes(sha->GetHashCode());`
- C. `SHA1 ^sha = gcnew SHA1CryptoServiceProvider();  
array<Byte>^hash = sha->ComputeHash(message);`
- D. `SHA1 ^sha = gcnew SHA1CryptoServiceProvider();  
sha->GetHashCode();  
array<Byte>^hash = sha->Hash;`

**Answer: C**

**Explanation:**

Initialise SHA1 object and call the ComputeHash method supplying the message as a parameter to return the hash code as an array of bytes.

A TransferBlock is more appropriate for hashing part of a message. Also it should be called with TransferEndBlock.

B&C GetHashCode is the method inherited from the Object class. It will not perform a hash on the incoming message.

**Question: 280**

You are writing an application that uses SOAP to exchange data with other applications.

You use a Department class that inherits from ArrayList to send objects to another application.

The Department object is named dept.

You need to ensure that the application serializes the Department object for transport by using SOAP. Which code should you use?

- A. `SoapFormatter^ formatter = gcnew SoapFormatter();  
array<Byte>^ buffer = gcnew array<Byte>(dept->Capacity);  
MemoryStream^ stream = gcnew MemoryStream(buffer);  
for each (Object^ o in dept) {  
formatter->Serialize(stream, o);  
}`
- B. `SoapFormatter^ formatter = gcnew SoapFormatter();  
array<Byte>^ buffer = gcnew array<Byte>(dept->Capacity);  
Memory Stream^ stream = gcnew MemoryStream(buffer);  
formatter->Serialize(stream, dept);`
- C. `SoapFormatter^ formatter = gcnew SoapFormatter();  
Memory Stream^ stream = gcnew MemoryStream();  
for each (Object^ o in dept) {  
formatter->Serialize(stream, o);`

```
}
D. SoapFormatter^ formatter = gcnew SoapFormatter();
MemoryStream^ stream = gcnew MemoryStream();
formatter->Serialize(stream, dept);
```

**Answer: D**

**Explanation:**

Simply serialize the entire object to a stream using a SoapFormatter.  
A&C attempt to serialize components of the object rather the object itself.  
B attempts to serialize to an array, however the array will not be big enough to store the serialized object because it is not sized on the entire object.

**Question: 281**

You are developing an application that will use custom authentication and role-based security.  
You need to write a code segment to make the runtime assign an unauthenticated principal object to each running thread.  
Which code segment should you use?

```
A. AppDomain^ domain = AppDomain::CurrentDomain;
domain->SetPrincipalPolicy(PrincipalPolicy::WindowsPrincipal);
B. ApDomain^ domain = AppDomain::CurrentDomain;
domain->SetThreadPrincipal(gcnew WindowsPrincipal(nullptr));
C. AppDomain^ domain = AppDomain::CurrentDomain;
domain->SetAppDomainPolicy(PolicyLevel::CreateAppDomainLevel());
D. AppDomain^ domain = AppDomain::CurrentDomain;
domain->SetPrincipalPolicy(PrincipalPolicy::UnauthenticatedPrincipal);
```

**Answer: D**

**Explanation:**

Setting the PrincipalPolicy for the AppDomain to UnauthenticatedPrincipal will default the Principal for each thread to an unauthenticated principal .  
A sets the policy to WindowsPrincipal, threads will have their principal set according the windows account that they are running as.  
B SetThreadPrincipal() does not set the default policy for all new threads. Also a WindowsPrincipal is used instead of UnauthenticatedPrincipal.  
C SetAppDomainPolicy is used to set the security policy level for the domain.

**Question: 282**

You write the following code. public delegate void FaxDocs(Object^ sender, FaxArgs^ args);  
You need to create an event that will invoke FaxDocs. Which code segment should you use?

```
A. public : static event FaxDocs^ Fax;
B. public : static event Fax^ FaxDocs;
C. public ref class FaxArgs : public EventArgs {
```

```

public : String^ CoverPageInfo;
FaxArgs (String^ coverInfo) {
this->CoverPageInfo = coverInfo;
}};
D. public ref class FaxArgs : public EventArgs {
public : String^ CoverPageInfo;
};

```

**Answer: A**

**Explanation:**

An event is declared by using the event keyword followed by a delegate type and then a name for the event.

B fax is not a delegate type.

C&D do not declare events.

**Question: 283**

You need to write a code segment that transfers the contents of a byte array named dataToSend by using a NetworkStream object named netStream. You need to use a cache of size 8,192 bytes. Which code segment should you use?

- A. MemoryStream^ memStream = genew MemoryStream(8192);  
memStream->Write(dataToSend, 0, (int) netStream->Length);
- B. MemoryStream^ memStream = gcnew MemoryStream(8192);  
netStream->Write(dataToSend, 0, (int) memStream->Lcngth);
- C. BufferedStream^ bufStream =  
gcnew Buffered Stream(netStream, 8192);  
bufStream->Write(dataToSend, 0, dataToSend->Length);
- D. BufferedStream^ bufStream =  
gcnew Buffered Stream(netStream);  
bufStream->Write(dataToSend, 0, 8192);

**Answer: C**

**Explanation:**

To send data using a cache it is necessary to use a BufferedStream.

The BufferedStream should be created with the cache size of 8192 bytes.

A & B do not employ caching.

D does not correctly initialise the BufferedStream to have a cache size of 8192 bytes.

**Question: 284**

You create a class library that contains the class hierarchy defined in the following code segment. (Line numbers are included for reference only.)

```

01. public ref class Employee {
02.
03.
public :

```

```

04. String^ Name;
05. };
06.
07. public ref class Manager : public Employee {
08.
09. public :
10. int Level;
11. };
12.
13. public ref class Group {
14.
15. public :
16. array<Employee^>^ Employees;
17. };

```

You create an instance of the Group class. You populate the fields of the instance. When you attempt to serialize the instance by using the Serialize method of the XmlSerializer class, you receive InvalidOperationException. You also receive the following error message: "There was an error generating the XML document."

You need to modify the code segment so that you can successfully serialize instances of the Group class by using the XmlSerializer class. You also need to ensure that the XML output contains an element for all public fields in the class hierarchy. What should you do?

A. Insert the following code between lines 14 and 15 of the code segment:

```

[XmlAttribute(Type = __typeof(Employee))]
[XmlAttribute(Type = __typeof(Manager))]

```

B. Insert the following code between lines 14 and 15 of the code segment:

```

[XmlElement(Type = __typeof(Employees))]

```

C. Insert the following code between lines 14 and 15 of the code segment:

```

[XmlElement(ElementName="Employees")]

```

D. Insert the following code between lines 3 and 4 of the code segment:

```

[XmlElement(Type = __typeof(Employee))]

```

and insert the following code segment between lines 8 and 9 of the code segment:

```

[XmlElement(Type = __typeof(Manager))]

```

**Answer: A**

### Question: 285

You are creating a class that performs complex financial calculations. The class contains a method named GetCurrentRate that retrieves the current interest rate and a variable named currRate that stores the current interest rate.

You write serialized representations of the class.

You need to write a code segment that updates the currRate variable with the current interest rate when an instance of the class is deserialized. Which code segment should you use?

A. [OnSerializing]void UpdateValue (StreamingContext^ context) {  
currRate = GetCurrentRate();  
}

```

B. [OnSerializing]void UpdateValue(SerializationInfo^ info) {
info->AddValue("currentRate", GetCurrentRate());
}
C. [OnDeserializing]void UpdateValue(SerializationInfo^ info) {
info->AddValue("currentRate", GetCurrentRate());
}
D. [OnDeserialized]void UpdateValue(StreamingContext^ context) {
currRate = GetCurrentRate();
}

```

**Answer: D**

**Explanation:**

A method with the OnDeserialized attribute will be called after Deserialization and any instance variables can be set.

A & B the method will fire during serializing, the question is concerned with reconstructing the object during deserialization.

C the OnDeserializing attribute is useful for default values. OnDeserializing attribute works with a method that contains a StreamContext parameter and not a SerializationInfo parameter.

**Question: 286**

You are developing a fiscal report for a customer. Your customer has a main office in the United States and a satellite office in Mexico.

You need to ensure that when users in the satellite office generate the report, the current date is displayed in Mexican Spanish format. Which code segment should you use?

```

A. CultureInfo^ culture = gcnew CultureInfo("es-MX", false);
DateTimeFormatInfo^ dtfi = culture->DateTimeFormat;
DateTime^ dt = gcnew DateTime(DateTime::Today::Year, DateTime::Today::Month,
DateTime::Today::Day);
String^ dateString = dt->ToString(dtfi->LongDatePattern);
B. Calendar^ cal = gcnew CultureInfo("es-MX", false)::Calendar;
DateTime^ dt = gcnew DateTime(DateTime::Today::Year, DateTime::Today::Month,
DateTime::Today::Day);
String^ dateString = dt->ToString();
C. String^ dateString =
DateTimeFormatInfo::CurrentInfo::GetMonthName(DateTime::Today::Month);
D. String^ dateString = DateTime::Today::Month::ToString("es-MX");

```

**Answer: A**

**Explanation:**

Create a Mexican Spanish CultureInfo object. Convert the date to a string using the DateTimeFormatInfo returned by the CultureInfo object.

B does not use the CultureInfo object to convert the date to a string.

C does not use the Mexican Spanish culture.

D the DateTime.ToString() method cannot take a string code representation of the culture.

**Question: 287**

You create an application that stores information about your customers who reside in various regions. You are developing internal utilities for this application.

You need to gather regional information about your customers in Canada.

Which code segment should you use?

A. for each (CultureInfo^ culture in  
CultureInfo::GetCultures(CultureTypes::SpecificCultures)) {  
// Output the region information...}

B. CultureInfo^ cultureInfo = gcnew CultureInfo("CA");  
// Output the region information...

C. RegionInfo^ regionInfo = gcnew RegionInfo("CA");

// Output the region information...

D. RegionInfo^ regionInfo = gcnew RegionInfo("");

if (regionInfo->Name == "CA") {

// Output the region information...}

**Answer: C**

**Explanation:**

The RegionInfo class can be used to get information about a region.

A & B CultureInfo is used to control formatting, sorting & comparing of culture sensitive data. E.g currencies, calendar dates etc.

D Does not initialise the RegionInfo object correctly i.e to Canada.

**Question: 288**

You need to generate a report that lists language codes and region codes.

Which code segment should you use?

A. for each (CultureInfo^ culture in  
CultureInfo::GetCultures(CultureTypes::SpecificCultures)) {  
// Output the culture information...}

B. CultureInfo^ culture = gcnew CultureInfo("");  
CultureTypes^ types = culture->CultureTypes;  
// Output the culture information...

C. for each (CultureInfo^ culture in  
CultureInfo::GetCultures(CultureTypes::NeutralCultures)) {  
// Output the culture information...}

D. for each (CultureInfo^ culture in  
CultureInfo::GetCultures(CultureTypes::ReplacementCultures)) {  
// Output the culture information...}

**Answer: A**

**Explanation:**

CultureTypes.SpecificCultures will filter all language codes that are specific to a country\region.

B The CultureInfo object created is not associated with any cultures.

C will yield only neutral cultures, they will not be specific to a country\region.

D Replacement cultures are user-defined custom cultures.

**Question: 289**

You write the following code to call a function from the Win32 Application Programming Interface (API) by using platform invoke.

```
int rc = MessageBox(hWnd, text, caption, type);
```

You need to define a method prototype. Which code segment should you use?

- A. [DllImport("user32")]extern int MessageBox(int hWnd, String^ text, String^ caption, uint type);
- B. [DllImport("user32")]extern int MessageBoxA(int hWnd, String^ text, String^ caption, uint type);
- C. [DllImport("user32")]extern int Win32API\_User32\_MessageBox(int hWnd, String^ text, String^ caption, uint type);
- D. [DllImport("C:\\WINDOWS\\system32\\user32.dll")]extern int MessageBox(int hWnd, String^ text, String^ caption, uint type);

**Answer: A****Explanation:**

Mark the prototype with the Dllimport attribute specifying the library\dll that the function resides in.

B creates a prototype for the MessageBoxA function not MessageBox .

C it is not necessary to specify the physical path because user32.dll will be in the path environment variable. Also it will not work with versions of windows (some may use c:\winnt\system32)

**Question: 290**

You develop a service application named PollingService that periodically calls long-running procedures. These procedures are called from the DoWork method.

You use the following service application code.

```
ref class PollingService : public ServiceBase {
public :
static bool blnExit = false;
protected :
override void OnStart(String^ args) {
do {
DoWork();
} while(!blnExit);
}
override void OnStop() {
blnExit = true;
}
private :
```

```
void DoWork() {} };
```

When you attempt to start the service, you receive the following error message: Could not start the PollingService service on the local computer. Error 1053: The service did not respond to the start or control request in a timely fashion. You need to modify the service application code so that the service starts properly. What should you do?

- A. Move the loop code into the constructor of the service class from the OnStart method.
- B. Drag a timer component onto the design surface of the service. Move the calls to the longrunning procedure from the OnStart method into the Tick event procedure of the timer, set the Enabled property of the timer to True, and call the Start method of the timer in the OnStart method.
- C. Add a class-level System.Timers.Timer variable to the service class code. Move the call to the DoWork method into the Elapsed event procedure of the timer, set the Enabled property of the timer to True, and call the Start method of the timer in the OnStart method.
- D. Move the loop code from the OnStart method into the DoWork method.

**Answer: C**

**Question: 291**

You are creating a class to compare a specially-formatted string. The default collation comparisons do not apply. You need to implement the IComparable<string> interface. Which code segment should you use?

- A. 

```
public ref class Person : public IComparable<String^>{
public : virtual Int32 CompareTo(String^ other){
}
}
```
- B. 

```
public ref class Person : public IComparable<String^>{
public : virtual Int32 CompareTo(Object^ other){
}
}
```
- C. 

```
public ref class Person : public IComparable<String^>{
public : virtual Boolean CompareTo(String^ other){
}
}
```
- D. 

```
public ref class Person : public IComparable<String^>{
public : virtual Boolean CompareTo(Object^ other){
}
}
```

**Answer: A**

**Question: 292**

You need to read the entire contents of a file named Message.txt into a single string variable. Which code segment should you use?

- A. 

```
String^ result = nullptr;
StreamReader^ reader = gcnew StreamReader("Message.txt");
result = reader->Read().ToString();
```
- B. 

```
String^ result = nullptr;
StreamReader^ reader = gcnew StreamReader("Message.txt");
```

```

result = reader->ReadToEnd();
C. String^ result = String::Empty;
StreamReader^ reader = gcnew StreamReader("Message.txt");
while (!reader->EndOfStream) {
result += reader->ToString();
}
D. String^ result = nullptr;
StreamReader^ reader = gcnew StreamReader("Message.txt");
result = reader->ReadLine();

```

**Answer: B**

**Explanation:**

Create a StreamReader based on the file and call the ReadToEnd() method to quickly read the entire file and return a string.

A & D does not read the entire file.

C calling ToString() on the reader will give a string representation of the stream and will not read from the stream.

**Question: 293**

You need to return the contents of an isolated storage file as a string. The file is machine-scoped and is named Settings.dat. Which code segment should you use?

```

A. IsolatedStorageFileStream^ isoStream;
isoStream = gcnew IsolatedStorageFileStream(
"Settings.dat", FileMode::Open);
String^ result = (gcnew Stream Reader(isoStream))> ReadToEnd();
B. IsolatedStorageFile^ isoFile;
isoFile = IsolatedStorageFile::GetMachineStoreForAssembly();
IsolatedStorage FileStream^ isoStream;
isoStream = gcnew IsolatedStorageFileStream(
"Settings.dat", FileMode::Open, isoFile);
String^ result = (gcnew StreamReadcr(isoStream))->ReadToEnd();
C. IsolatedStorageFileStream^ isoStream;
isoStream = gcnew IsolatedStorageFileStream(
"Settings .dat", FileMode::Open);
String^ result = isoStream->ToString();
D. IsolatedStorageFile^ isoFile;
isoFile = IsolatedStorageFile::GetMachineStoreForAssembly();
IsolatedStorageFileStream^ isoStream;
isoStream = gcnew IsolatedStorageFileStream(
"Settings .dat", FileMode::Opcn, isoFile);
String^ result = isoStream->ToString();

```

**Answer: B**

**Explanation:**

Retrieve the IsolatedStorageFile for the machine store. Use an IsolatedStorageFileStream to read from the desired file within the machine store.

A & C do not get the IsolatedStorageFile for the machine context.

D returns a string representation of the IsolatedStorageFileStream object not a String of the files contents as the question requests.

**Question: 294**

You need to write a code segment that transfers the first 80 bytes from a stream variable named stream1 into a new byte array named byteArray. You also need to ensure that the code segment assigns the number of bytes that are transferred to an integer variable named bytesTransferred.

Which code segment should you use?

A. bytesTransferred = stream1->Read(byteArray, 0, 80);

B. for(int i = 0;

i < 80;

i++) {

stream1->WriteByte(byteArray[i]);

bytesTransferred = i;

if (!stream1->CanWrite) {

break;

}}

C. while (bytesTransferred < 80) {

stream1->Seek(1, SeekOrigin::Current);

byteArray[bytesTransferred++] =

Convert::ToByte(stream1->ReadByte());

}

D. stream1->Write(byteArray, 0, 80);

bytesTransferred = byteArray->Length;

**Answer: A****Explanation:**

The Read() method accepts a byte array and the start position and number of bytes to read as parameters.

B & D The question indicates that data should be read from the stream not written to it.

C it is unnecessary to attempt to read byte by byte, the Read() method provides a very efficient way of reading into a byte array.

**Question: 295**

You need to create a class definition that is interoperable along with COM. You need to ensure that COM applications can create instances of the class and can call the GetAddress method.

Which code segment should you use?

A. public ref class Customer {

string addressString;

```

public:
Customer(string address) : addressString(address) { }
String^ GetAddress() { return addressString;
}}
B. public ref class Customer {
static string addressString;
public:
Customer() { }
static String^ GetAddress() { return addressString;
}}
C. public ref class Customer {
string addressString;
public: Customer() { }
String^ GetAddress() { return addressString;
}}
D. public ref class Customer {
string addressString;
public:
Customer() { }private:
String^ GetAddress() { return addressString;
}}

```

**Answer: C**

**Explanation:**

The class should be declared with a parameter less constructor and the getAddress() method should be public.

A uses a constructor with Parameters.

B uses static members that are not supported in COM

D the method GetAddress() must be public to be accessible by COM.

**Question: 296**

You create a class library that is used by applications in three departments of Company.com. The library contains a Department class with the following definition.

```

public ref class Department {
public :
String^ name;
String^ manager;
};

```

Each application uses a custom configuration section to store department-specific values in the application configuration file as shown in the following code.

```

<Department>
<name>Hardware</name>
<manager>Company</manager>
</Department>

```

You need to write a code segment that creates a Department object instance by using the field values retrieved from the application configuration file. Which code segment should you use?

- A. `public ref class deptElement : public ConfigurationElement {  
protected :  
override void DeserializeElement(XmlReader^ reader,  
bool^ serializeCollectionKey) {  
Department^ dept = gcnew Department();  
dept->name = ConfigurationManager::AppSettings ["name"];  
dept->manager = ConfigurationManager::AppSettings ["manager"];  
return dept;  
}};`
- B. `public ref class deptElement : public ConfigurationElement {  
protected :  
override void DeserializeElement(XmlReader^ reader,  
bool^ serializeCollectionKey) {  
Department^ dept = gcnew Department();  
dept->name = reader->GetAttribute("name");  
dept->manager = reader->GetAttribute("manager");  
}};`
- C. `public ref class deptHandler :  
public IConfigurationSectionHandler {  
public :  
Object^ Create(Object^ parent, Object^ configContext,  
System.Xml.XmlNode section) {  
Department^ dept = gcnew Department();  
dept->name = section->SelectSingleNode("name")->InnerText;  
dept->manager = section->SelectSingleNode("manager")->InnerText;  
return dept;  
}};`
- D. `public ref class deptHandler : public IConfigurationSectionHandler {  
public :  
Object^ Create(Object^ parent, Object^ configContext,  
System.Xml.XmlNode^ section) {  
Department^ dept = gcnew Department();  
dept->name = section->Attributes["name"].Value;  
dept->manager = section->Attributes["manager"].Value;  
return dept;  
}};`

**Answer: C**

#### **Question: 297**

You are writing an application that uses isolated storage to store user preferences. The application uses multiple assemblies. Multiple users will use this application on the same computer. You need to create a directory named Preferences in the isolated storage area that is

scoped to the current Microsoft Windows identity and assembly.  
Which code segment should you use?

- A. IsolatedStorageFile^ store;  
store = IsolatedStorageFile::GetUserStoreForAssembly();  
store->CreateDirectory("Preferences");
- B. IsolatedStorageFile^ store;  
store = IsolatedStorageFile::GetMachineStoreForAssembly();  
store->CreateDirectory("Preferences");
- C. IsolatedStorageFile^ store;  
store = IsolatedStorageFile::GetUserStoreForDomain();  
store->CreateDirectory("Preferences");
- D. IsolatedStorageFile^ store;  
store = IsolatedStorageFile::GetMachineStoreForApplication();  
store->CreateDirectory("Preferences");

**Answer: A**

**Explanation:**

The user store for the assembly is the correct store that is required. It is returned by IsolatedStorageFile.GetUserStoreForAssembly().  
B,C & D return Isolated Storage File stores of incorrect scope

**Question: 298**

You are using the Microsoft Visual Studio 2005 IDE to examine the output of a method that returns a string. You assign the output of the method to a string variable named fName. You need to write a code segment that prints the following on a single line The message: "Test Failed: " The value of fName if the value of fName does not equal "Company" You also need to ensure that the code segment simultaneously facilitates uninterrupted execution of the application. Which code segment should you use?

- A. Debug::Assert(fName == "Company", "Test Failed: ", fName);
- B. Debug::WriteLineIf(fName != "Company", fName, "Test Failed");
- C. if (fName != "Company") {  
Debug::Print("Test Failed: ");  
Debug::Print(fName);  
}
- D. if (fName != "Company") {  
Debug::WriteLine("Test Failed: ");  
Debug::WriteLine(fName);  
}

**Answer: B**

**Explanation:**

Debug.WriteLineIf() will conditionally write the "Test Failed", it will not interrupt execution of the application.

A an Assert will stop execution of the application in debug mode if the condition is not met.  
C & D could be used but they execute in the release configurations

**Question: 299**

You are developing a method that searches a string for a substring. The method will be localized to Italy.

Your method accepts the following parameters: The string to be searched, which is named searchListThe string for which to search, which is named searchValue You need to write the code. Which code segment should you use?

- A. `return searchList->IndexOf(searchValue);`
- B. `CompareInfo^ comparer =  
gcnew CultureInfo("it-IT")::CompareInfo;  
return comparer->Compare(searchList, searchValue);`
- C. `CultureInfo^ comparer = gcnew CultureInfo("it-IT");  
if (searchList->IndexOf(searchValue)  
> 0) {  
return true;  
} else {  
return false;  
}`
- D. `CompareInfo^ comparer =  
gcnew CultureInfo("it-IT")::CompareInfo;  
if (comparer->IndexOf(searchList,  
searchValue) > 0) {  
return true;  
} else {  
return false;  
}`

**Answer: D**

**Question: 300**

You need to write a code segment that will create a common language runtime (CLR) unit of isolation within an application. Which code segment should you use?

- A. `AppDomainSetup^ mySetup =  
AppDomain::CurrentDomain::SetupInformation;  
mySetup->ShadowCopyFiles = "true";`
- B. `System::Diagnostics::Process^ myProcess;  
myProcess = gcnew System::Diagnostics::Process();`
- C. `AppDomain^ domain;  
domain = AppDomain::CreateDomain("CompanyDomain");`
- D. `System::ComponentModel::Component^ myComponent;  
myComponent = gcnew System::ComponentModel::Component();`

**Answer: C**

**Explanation:**

Create a new ApplicationDomain using the AppDomain.CreateDomain() method.

A ShadowCopyFiles property of AppDomainSetup controls whether shadow copying is enabled or disabled.

B the Process class is used to represent an existing process running on a computer.

D The ComponentModel.Component class is used for sharing components between applications.

**Question: 301**

You create an application to send a message by e-mail. An SMTP server is available on the local subnet. The SMTP server is named smtp.Company.com.

To test the application, you use a source address, me@Company.com, and a target address, you@Company.com.

You need to transmit the e-mail message. Which code segment should you use?

A. MailAddress addrFrom("me@Company.com", "Me");

MailAddress addrTo("you@Company.com", "You");

MailMessage message(addrFrom, addrTo);

message.Subject = "Greetings!";

message.Body = "Test";

message.Dispose();

B. String^ strSmtpClient = "smtp.Company.com";

String^ strFrom = "me@Company.com";

String^ strTo = "you@Company.com";

String^ strSubject = "Greetings!";

String^ strBody = "Test";

MailMessage msg(strFrom, strTo, strSubject, strSmtpClient);

C. MailAddress addrFrom("me@Company.com");

MailAddress addrTo("you@Company.com");

MailMessage message( addrFrom, addrTo);

message.Subject = "Greetings!";

message.Body = "Test";

SmtpClient client("smtp.Company.com");

client.Send(message);

D. MailAddress^ addrFrom =

gcnew MailAddress("me@Company.com", "Me");

MailAddress^ addrTo = gcnew MailAddress("you@Company.com", "You");

MailMessage^ message = gcnew MailMessage(addrFrom, addrTo);

message->Subject = "Greetings!";

message->Body = "Test";

SocketInformation info;

Socket^ client = gcnew Socket(info);

System::Text::ASCIIEncoding^ enc = gcnew System::Text::ASCIIEncoding();

array<unsigned char>^ msgBytes = enc->GetBytes(message->ToString());

client->Send(msgBytes);

**Answer: C**

**Explanation:**

To Send a simple mail message construct a MailMessage object and a SmtpClient object. Call the SmtpClient.Send instance method supplying the MailMessage object as a parameter.

A creates a MailMessage but then destroys it.

B creates a MailMessage but then does not do anything with it.

D tries to do something with sockets, this is unnecessary because there is a SMTP server available. The question implies delivering the mail via SMTP.

**Question: 302**

You write the following code segment to call a function from the Win32 Application Programming Interface (API) by using platform invoke.

```
String^ personName = "N?el";
```

```
String^ msg = "Welcome" + personName + "to club "!";
```

```
bool rc = User32API::MessageBox(0, msg, personName, 0);
```

You need to define a method prototype that can best marshal the string data. Which code segment should you use?

```
A. [DllImport("user32", CharSet = CharSet::Ansi)]extern bool MessageBox(int hWnd,
String^ text,
String^ caption,
unsigned int type);
}
```

```
B. [DllImport("user32", EntryPoint = "MessageBoxA", CharSet = CharSet::Ansi)]extern
bool MessageBox(int hWnd,
[MarshalAs(UnmanagedType::LPWStr)]String^ text,
[MarshalAs(UnmanagedType::LPWStr)]String^ caption,
unsigned int type);
}
```

```
C. [DllImport("user32", CharSet = CharSet::Unicode)]extern bool MessageBox(int
hWnd,
String^ text,
String^ caption,
unsigned int type);
}
```

```
D. [DllImport("user32", EntryPoint = "MessageBoxA", CharSet =
CharSet::Unicode)]extern bool MessageBox(int hWnd,
[MarshalAs(UnmanagedType.LPWStr)]String^ text,
[MarshalAs(UnmanagedType.LPWStr)]String^ caption,
unsigned int type);
}
```

**Answer: C**

**Question: 303**

You are creating an application that retrieves values from a custom section of the application configuration file. The custom section uses XML as shown in the following block.

```
<ProjectSection name="ProjectCompany">
<role name="administrator" />
<role name="manager" />
<role name="support" />
</ProjectSection>
```

You need to write a code segment to define a class named Role. You need to ensure that the Role class is initialized with values that are retrieved from the custom section of the configuration file. Which code segment should you use?

A. public ref class Role : public ConfigurationElement {  
protected :  
static String^ \_ElementName = "name";  
public :  
[ConfigurationProperty("role")]  
property String^ Name {  
String^ get() {return ((String^)base["role"]);  
}  
}};

B. public ref class Role : public ConfigurationElement {  
protected :  
static String^ \_ElementName = "role";  
public :  
[ConfigurationProperty("name", IsRequired = true)]  
property String^ Name {  
String^ get() {return ((String^)base["name"]);  
}  
}};

C. public ref class Role : public ConfigurationElement {  
private :  
String^ \_name;  
protected :  
static String^ \_ElementName = "role";  
public :  
[ConfigurationProperty("name")]  
property String^ Name {  
String^ get() {return \_name;  
}  
}};

D. public ref class Role : public ConfigurationElement {  
private :  
String ^ \_name;  
protected :  
static String^ \_ElementName = "name";

```

public :
[ConfigurationProperty("role", IsRequired = true)]
property String^ Name {
String^ get() {return _name;
}
}};

```

**Answer: B**

**Question: 304**

You are testing a component that serializes the Meeting class instances so that they can be saved to the file system. The Meeting class has the following definition:

```

public ref class Meeting {
private :
String^ title;
public :
int roomNumber;
array<String^>^ invitees;
Meeting(){}
Meeting(String^ t){
title = t;
} };

```

The component contains a procedure with the following code segment.

```

Meeting^ myMeeting = gcnew Meeting("Goals");
myMeeting->roomNumber = 1100;
array<String^>^ attendees = gcnew array<String^>(2)
{"Company", "Mary"};
myMeeting->invitees = attendees;
XmlSerializer^ xs = gcnew XmlSerializer(__typeof(Meeting));
StreamWriter^ writer = gcnew StreamWriter("C:\\Meeting.xml");
xs->Serialize(writer, myMeeting);
writer->Close();

```

You need to identify the XML block that is written to the C:\Meeting.xml file as a result of running this procedure. Which XML block represents the content that will be written to the C:\Meeting.xml file?

A. <?xml version="1.0" encoding="utf-8"?>  
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"  
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">  
<title>Goals</title>  
<roomNumber>1100</roomNumber>  
<invitee>Company</invitee>  
<invitee>Mary</invitee>  
</Meeting>

B. <?xml version="1.0" encoding="utf-8"?>  
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"  
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

```

<roomNumber>1100</roomNumber>
<invitees>
<string>Company</string>
<string>Mary</string>
</invitees>
</Meeting>
C. <?xml version="1.0" encoding="utf-8"?>
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
title="Goals">
<roomNumber>1100</roomNumber>
<invitees>
<string>Company</string>
<string>Mary</string>
</invitees>
</Meeting>
D. <?xml version="1.0" encoding="utf-8"?>
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<roomNumber>1100</roomNumber>
<invitees>
<string>Company</string>
</invitees>
<invitees>
<string>Mary</string>
</invitees>
</Meeting>

```

**Answer: B**

**Explanation:**

A & C show title member in the XML. Title is a private member hence will not be serialized to XML.

D Shows multiple Invitees. There is only one object of type Invitees in the class definition.

**Question: 305**

You need to serialize an object of type List<int> in a binary format. The object is named data.

Which code segment should you use?

```

A. BinaryFormatter^ formatter = gcnew BinaryFormatter();
MemoryStream^ stream = gcnew MemoryStream();
formatter->Serialize(stream, data);
B. BinaryFormatter^ formatter = gcnew BinaryFormatter();
MemoryStream^ stream = gcnew MemoryStream();
for(int i=0;
i <data->Count;
i++) {

```

```

formatter->Serialize(stream, data[i]);
}
C. BinaryFormatter^ formatter = gcnew BinaryFormatter();
array<Byte>^ buffer = gcnew array<Byte>(data->Count);
Memory Stream^ stream = gcnew Memory Stream(buffer, true);
formatter->Serialize(stream, data);
D. BinaryFormatter^ formatter = gcnew BinaryFormatter();
MemoryStream^ stream = gcnew MemoryStream();
Capture c(formatter, stream);
data->ForEach(gcnew Action<int>(%c,&Capture::Action));

```

**Answer: A**

**Explanation:**

create a BinaryFormatter and a MemoryStream and simply use the formatter to serialize the data to the stream.

B Collections support serialization, hence it is not required to try to serialize each item independently.

C The MemoryStream is created to be non resizeable and it is not the correct size.

**Question: 306**

You develop a service application named PollingService that periodically calls long-running procedures. These procedures are called from the DoWork method.

You use the following service application code:

```

partial class PollingService : ServiceBase {
 bool blnExit = false;
 public PollingService() {}
 protected override void OnStart(string[] args) {
 do {
 DoWork();
 } while (!blnExit);
 }
 protected override void OnStop() {
 blnExit = true;
 }
 private void DoWork() {
 ...
 }
}

```

When you attempt to start the service, you receive the following error message: Could not start the PollingService service on the local computer. Error 1053: The service did not respond to the start or control request in a timely fashion. You need to modify the service application code so that the service starts properly. What should you do?

A. Move the loop code into the constructor of the service class from the OnStart method.

B. Drag a timer component onto the design surface of the service. Move the calls to the longrunning procedure from the OnStart method into the Tick event procedure of the timer, set the Enabled property of the timer to True, and call the Start method of the timer in the

OnStart method.

C. Add a class-level System.Timers.Timer variable to the service class code. Move the call to the DoWork method into the Elapsed event procedure of the timer, set the Enabled property of the timer to True, and call the Start method of the timer in the OnStart method.

D. Move the loop code from the OnStart method into the DoWork method.

**Answer: C**

**Question: 307**

You are developing an application to perform mathematical calculations. You develop a class named CalculationValues. You write a procedure named PerformCalculation that operates on an instance of the class.

You need to ensure that the user interface of the application continues to respond while calculations are being performed. You need to write a code segment that calls the PerformCalculation procedure to achieve this goal.

Which code segment should you use?

```
A. public ref class CalculationValues {};
public ref class Calculator {
public :
void PerformCalculation() {}
};
public ref class ThreadTest{
private :
void DoWork (){
CalculationValues^ myValues = gcnew CalculationValues();
Calculator^ calc = gcnew Calculator();
Thread^ newThread = gcnew Thread(
gcnew ThreadStart(calc, &Calculator::PerformCalculation));
newThread->Start(myValues);
}};
```

```
B. public ref class CalculationValues {};
public ref class Calculator {
public :void PerformCalculation() {}
};
public ref class ThreadTest{
private :
void DoWork (){
CalculationValues^ myValues = gcnew CalculationValues();
Calculator^ calc = gcnew Calculator();
ThreadStart^ delStart = gcnew
ThreadStart(calc, &Calculator::PerformCalculation);
Thread^ newThread = gcnew Thread(delStart);
if (newThread->IsAlive) {
newThread->Start(myValues);
}
}};
```

```
C. public ref class CalculationValues {};
```

```

public ref class Calculator {
public :
void PerformCalculation(CalculationValues^ values) {} };
public ref class ThreadTest{
private :
void DoWork (){
CalculationValues^ my Values = gcnew CalculationValues();
Calculator^ calc = gcnew Calculator();
Application::DoEvents();
calc->PerformCalculation(my Values);
Application::DoEvents();
}};
D. public ref class CalculationValues {};
public ref class Calculator {
public :
void PerformCalculation(Object^ values) {} };
public ref class ThreadTest{
private :
void DoWork (){
CalculationValues^ myValues = gcnew CalculationValues();
Calculator^ calc = gcnew Calculator();
Thread^ newThread = gcnew Thread(
gcnew ParameterizedThreadStart(calc,
&Calculator::PerformCalculation));
newThread->Start(my Values);
}};

```

**Answer: D**

**Explanation:**

It is a requirement that the UI continues to respond, hence PerformCalculation should execute in a separate thread. PerformCalculation requires a parameter hence you should use the ParameterizedThreadStart delegate.

A& B attempt to supply a parameter to the ThreadStart delegate. This is not possible.

C Does not run in a new thread and hence may leave the UI unresponsive.

**Question: 308**

You are testing a newly developed method named PersistToDB. This method accepts a parameter of type EventLogEntry. This method does not return a value. You need to create a code segment that helps you to test the method. The code segment must read entries from the application log of local computers and then pass the entries on to the PersistToDB method. The code block must pass only events of type Error or Warning from the source MySource to the PersistToDB method. Which code segment should you use?

```

A. EventLog^ myLog = gcnew EventLog("Application", ".");
for each (EventLogEntry^ entry in myLog->Entries) {

```

```

if (entry->Source == "MySource") {
PersistToDB(entry);
}}
B. EventLog^ myLog = gcnew EventLog("Application", ".");
myLog->Source = "MySource";
for each (EventLogEntry^ entry in myLog->Entries) {
if (entry->EntryType == (EventLogEntryType::Error &
EventLogEntryType::Warning)) {
PersistToDB(entry);
}}
C. EventLog^ myLog = gcnew EventLog("Application", ".");
for each (EventLogEntry^ entry in myLog->Entries) {
if (entry->Source == "MySource") {
if (entry->EntryType == EventLogEntryType::Error ||
entry->EntryType == EventLogEntryType::Warning) {
PersistToDB(entry);
}
}}
D. EventLog^ myLog = gcnew EventLog("Application", ".");
myLog->Source = "MySource";
for each (EventLogEntry^ entry in myLog->Entries) {
if (entry->EntryType == EventLogEntryType::Error ||
entry->EntryType == EventLogEntryType::Warning) {
PersistToDB(entry);
}}

```

**Answer: C**

### **Explanation:**

It is necessary to create a new Application EventLog, iterate over all the EventLogEntries and call the PersistToDB method if the entry is a warning or error and the source is MySource.

A will PersistToDb irrespective of the type of log entry. The question explicitly states only warnings and errors should be persisted.

B features an incorrect test for warnings and errors.

D&B do not ensure that only MySource entries are persisted. Instead they overwrite the source.

### **Question: 309**

You are developing a method to decrypt data that was encrypted with the Triple DES Algorithm. The method accepts the following parameters: The byte array to be decrypted, which is named cipherMessageThe key, which is named keyAn initialization vector, which is named iv You need to decrypt the message by using the TripleDES class and place the result in a string. Which code segment should you use?

```

A. TripleDES ^des = gcnew TripleDESCryptoServiceProvider();
des->BlockSize = cipherMessage->Length;
ICryptoTransform ^crypto = des->CreateDecryptor(key, iv);

```

```

MemoryStream ^cipherStream = gcnew MemoryStream(cipherMessage);
CryptoStream ^cryptoStream = gcnew CryptoStream(cipherStream, crypto,
CryptoStreamMode::Read);
String^ message;
StreamReader ^sReader = gcnew StreamReader(cryptoStream);
message = sReader->ReadToEnd();
B. TripleDES^ des = gcnew TripleDESCryptoServiceProvider();
des->FeedbackSize = cipherMessage->Length;
ICryptoTransform^ crypto = des->CreateDecryptor(key, iv);
MemoryStream^ cipherStream = gcnew MemoryStream(cipherMessage)
CryptoStream^ cryptoStream = gcnew CryptoStream(cipherStream, crypto,
CryptoStreamMode::Read);
String ^message;
StreamReader ^sReader = gcnew StreamReader(cryptoStream);
message = sReader->ReadToEnd();
C. TripleDES^ des = gcnew TripleDESCryptoServiceProvider();
ICryptoTransform^ crypto = des->CreateDecryptor();
MemoryStream^ cipher Stream = gcnew MemoryStream(cipherMessage);
CryptoStream^ cryptoStream = gcnew CryptoStream(cipherStream, crypto,
CryptoStreamMode::Read);
String ^message;
StreamReader ^sReader = gcnew StreamReader(cryptoStream);
message = sReader->ReadToEnd();
D. TripleDES^ des = gcnew TripleDESCryptoServiceProvider();
ICryptoTransform^ crypto = des->CreateDecryptor(key, iv);
MemoryStream^ cipherStream = gcnew MemoryStream(cipherMessage);
CryptoStream^ cryptoStream = gcnew CryptoStream(cipherStream, crypto,
CryptoStreamMode::Read);
String ^message;
StreamReader ^sReader = gcnew StreamReader(cryptoStream);
message = sReader->ReadToEnd();

```

**Answer: D**

### Question: 310

You are creating an application that lists processes on remote computers. The application requires a method that performs the following tasks: Accept the remote computer name as a string parameter named strComputer. Return an ArrayList object that contains the names of all processes that are running on that computer. You need to write a code segment that retrieves the name of each process that is running on the remote computer and adds the name to the ArrayList object. Which code segment should you use?

```

A. ArrayList^ al = gcnew ArrayList();
array<Process^> procs = Process::GetProcessesByName(strComputer);
for each (Process^ proc in procs) {
al->Add(proc);

```

```

}
B. ArrayList^ al = gcnew ArrayList();
array<Process^> procs = Process::GetProcesses(strComputer);
for each (Process^ proc in procs) {
al->Add(proc);
}
C. ArrayList^ al = gcnew ArrayList();
array<Process^> procs = Process::GetProcessesByName(strComputer);
for each (Process^ proc in procs) {
al->Add(proc->ProcessName);
}
D. ArrayList^ al = gcnew ArrayList();
array<Process^> procs = Process::GetProcesses(strComputer);
for each (Process^ proc in procs) {
al->Add(proc->ProcessName);
}

```

**Answer: D**

**Explanation:**

Call Processes.GetProcesses() supplying the name of the computer and then iterate through the returned collection of processes adding the process name to the arraylist.

A & C use GetProcessByName() and return processes on the current computer only.

B adds the entire process to the arraylist rather than just the process name.

**Question: 311**

You are creating an application that retrieves values from a custom section of the application configuration file. The custom section uses XML as shown in the following block.

```

<ProjectSection name="ProjectCompany">
<role name="administrator" />
<role name="manager" />
<role name="support" />
</ProjectSection>

```

You need to write a code segment to define a class named Role. You need to ensure that the Role class is initialized with values that are retrieved from the custom section of the configuration file. Which code segment should you use?

```

A. public class Role : ConfigurationElement {
internal string _ElementName = "name";
[ConfigurationProperty("role")]
public string Name {
get {
return ((string)base["role"]);
}
}
}

```

```

B. public class Role : ConfigurationElement {
internal string _ElementName = "role";
[ConfigurationProperty("name", RequiredValue = true)]
public string Name {
get {
return ((string)base["name"]);
}
}
}

C. public class Role : ConfigurationElement {
internal string _ElementName = "role";
private string _name;
[ConfigurationProperty("name")]
public string Name {
get {
return _name;
}
}
}

D. public class Role : ConfigurationElement {
internal string _ElementName = "name";
private string _name;
[ConfigurationProperty("role", RequiredValue = true)]
public string Name {
get {
return _name;
}
}
}

```

**Answer: B**

### Question: 312

You are testing a method that examines a running process. This method returns an ArrayList containing the name and full path of all modules that are loaded by the process. You need to list the modules loaded by a process named C:\TestApps\Process1.exe. Which code segment should you use?

```

A. ArrayList^ ar = gcnew ArrayList();
array<Process^> procs;
ProcessModuleCollection^ modules;
procs = Process::GetProcesses(@"Process1");
if (procs->Length > 0) {
modules = procs[0]->Modules;
for each (ProcessModule^ mod in modules) {
ar->Add(mod->ModuleName);
}
}

```

```

}}
B. ArrayList^ ar = gcnew ArrayList();
array<Process^> procs;
ProcessModuleCollection^ modules;
procs = Process::GetProcesses(@“C:\TestApps\Process1.exe”);
if (procs->Length > 0) {
modules = procs[0]->Modules;
for each (ProcessModule^ mod in modules) {
ar->Add(mod.ModuleName);
}}
C. ArrayList^ ar = gcnew ArrayList();
array<Process^> procs;
ProcessModuleCollection^ modules;
procs = Process::GetProcessesByName(@“Process1”);
if (procs->Length > 0) {
modules = procs[0]->Modules;
for each (ProcessModule^ mod in modules) {
ar->Add(mod->FileName);
}}
D. ArrayList^ ar = gcnew ArrayList();
array<Process^> procs;
ProcessModuleCollection^ modules;
procs = Process->GetProcessesByName(
@“C:\TestApps\Process1.exe”);
if (procs->Length > 0) {
modules = procs[0]->Modules;
for each (ProcessModule^ mod in modules) {
ar->Add(mod->FileName);
}}

```

**Answer: C**

**Explanation:**

Process.GetProcessesByName() should be used to return all the processes that match a process name. The modules collection exposes all the modules loaded by the process and can be added to an ArrayList.

A & B GetProcesses() accepts a computer name for retrieving the processes on a remote computer. GetProcessesByName() should be used to return processes by their name.  
D the path of the process is not part of the process name.

**Question: 313**

You are developing an application for a client residing in Hong Kong.  
You need to display negative currency values by using a minus sign. Which code segment should you use?

```

A. NumberFormatInfo^ culture =
gcnew CultureInfo("zh-HK")::NumberFormat;
culture->NumberNegativePattern = 1;
return numberToPrint->ToString("C", culture);
B. NumberFormatInfo^ culture =
gcnew CultureInfo("zh-HK")::NumberFormat;
culture->CurrencyNegativePattern = 1;
return numberToPrint->ToString("C", culture);
C. CultureInfo^ culture =
gcnew CultureInfo("zh-HK");
return numberToPrint->ToString("-(0)", culture);
D. CultureInfo^ culture =
gcnew CultureInfo("zh-HK");
return numberToPrint->ToString("()", culture);

```

**Answer: B**

**Explanation:**

Use CurrencyNegativePattern property set to 1 to display negative currency values with a minus sign.

A will give a minus sign for negative numbers but not for negative currencies.

C & D The culture has not been to display a minus sign for currency.

**Question: 314**

You are creating a class named Age.

You need to ensure that the Age class is written such that collections of Age objects can be sorted. Which code segment should you use?

```

A. public ref class Age {
public : Int32 Value;
public : virtual Object CompareTo(Object^ obj) {
if (obj->GetType() == Age::GetType()) {
Age^ _age = (Age^) obj;
return Value.CompareTo(obj);
}
throw gcnew ArgumentException("object not an Age");
}};
B. public ref class Age {
public : Int32 Value;
public : virtual Object CompareTo(Int32^ iValue) {
try {
return Value.CompareTo(iValue);
} catch (Exception^ ex) {
throw gcnew ArgumentException("object not an Age");
}
}};

```

```

C. public ref class Age : public IComparable {
public : Int32 Value;
public : virtual Int32 CompareTo(Object^ obj) {
if (obj->GetType() == Age::GetType()) {
Age^ _age = (Age^) obj;
return Value.CompareTo(_age->Value);
}
throw gcnew ArgumentException("object not an Age");
}};

D. public ref class Age : public IComparable {
public : Int32 Value;
public : virtual Int32 CompareTo(Object^ obj) {
try {
return Value.CompareTo(((Age^) obj)->Value);
} catch (Exception^ ex) {
return -1;
}
}};

```

**Answer: C**

### Question: 315

You are creating a new security policy for an application domain. You write the following lines of code.

```

PolicyLevel ^policy = PolicyLevel::CreateAppDomainLevel();
PolicyStatement ^noTrustStatement =
gcnew PolicyStatement(
policy->GetNamedPermissionSet("Nothing"));
PolicyStatement ^fullTrustStatement =
gcnew PolicyStatement(
policy->GetNamedPermissionSet("FullTrust"));

```

You need to arrange code groups for the policy so that loaded assemblies default to the Nothing permission set. If the assembly originates from a trusted zone, the security policy must grant the assembly the FullTrust permission set. Which code segment should you use?

```

A. CodeGroup ^group1 = gcnew FirstMatchCodeGroup(
gcnew ZoneMembershipCondition(SecurityZone::Trusted),
fullTrustStatement);
CodeGroup ^group2 = gcnew UnionCodeGroup(
gcnew AllMembershipCondition(),
noTrustStatement);
group1->AddChild(group2);

B. CodeGroup ^group1 = gcnew FirstMatchCodeGroup(
gcnew AllMembershipCondition(),
noTrustStatement);
CodeGroup ^group2 = gcnew UnionCodeGroup(

```

```
gcnew ZoneMembershipCondition(SecurityZone::Trusted),
fullTrustStatement);
group1->AddChild(group2);
C. CodeGroup ^group = gcnew UnionCodeGroup(
gcnew ZoneMembershipCondition(SecurityZone::Trusted),
fullTrustStatement);
D. CodeGroup ^group = gcnew FirstMatchCodeGroup(
gcnew AllMembershipCondition(),
noTrustStatement);
```

**Answer: B**

**Question: 316**

You are writing a method that accepts a string parameter named message.  
Your method must break the message parameter into individual lines of text and pass each line to a second method named Process.  
Which code segment should you use?

```
A. StringReader^ reader = gcnew StringReader(message);
Process(reader->ReadToEnd());
reader->Close();
B. StringReader^ reader = gcnew StringReader(message);
while (reader->Peek() != -1) {
String^ line = reader->Read().ToString();
Process(line);
}
reader->Close();
C. StringReader^ reader = gcnew StringReader(message);
Process(reader->ToString());
reader->Close();
D. StringReader^ reader = gcnew StringReader(message);
while (reader->Peek() != -1) {
Process(reader->ReadLine());
}
reader->Close();
```

**Answer: D**

**Explanation:**

StringReader.ReadLine() allows for lines to be read line by line.  
A ReadToEnd() will read the entire stream.  
B Read() will not read the line but only the next character.  
C will not read from the message but will just give a string representation of the reader.

**Question: 317**

You need to create a dynamic assembly named MyAssembly. You also need to save the

assembly to disk. Which code segment should you use?

- A. `AssemblyName^ myAssemblyName = gcnew AssemblyName();  
myAssemblyName->Name = "MyAssembly";  
AssemblyBuilder^ myAssemblyBuilder =  
AppDomain::CurrentDomain->DefineDynamicAssembly(  
myAssemblyName, AssemblyBuilderAccess::Run);  
myAssemblyBuilder->Save("MyAssembly.dll");`
- B. `AssemblyName^ myAssemblyName = gcnew AsscmblyName();  
myAssemblyName->Name = "MyAssembly";  
AssemblyBuilder^ myAssemblyBuilder =  
AppDomain::CurrentDomain->DefineDynamicAssembly(  
myAssemblyName, AssemblyBuilderAccess::Save);  
myAssemblyBuilder->Save("MyAssembly.dll");`
- C. `AssemblyName^ myAssemblyName = gcnew AssemblyName();  
AssemblyBuilder^ myAssemblyBuilder =  
AppDomain::CurrentDomain->DefineDynamicAssembly(  
myAssemblyName, AssemblyBuilderAccess::RunAndSave);  
myAssemblyBuilder->Save("MyAssembly.dll");`
- D. `AssemblyName^ myAssemblyName =  
gcnew AssemblyName("MyAssembly");  
AssemblyBuilder^ myAssemblyBuilder =  
AppDomain::CurrentDomain->DefineDynamicAssembly(  
myAssemblyName, AssemblyBuilderAccess::Save);  
myAssemblyBuilder->Save("c:\\MyAssembly.dll");`

**Answer: B**

**Explanation:**

Create an AssemblyName object and use it to construct an AssemblyBuilder with save privilege. Finally call the Save method on the AssemblyBuilder to write the assembly to disk.

- A Creates an assembly that does not have the privilege to save to disk.
- C does not provide a name the assembly
- D attempts to define a physical file location, this is not compatible with AssemblyBuilder.Save

**Question: 318**

You are developing an application to assist the user in conducting electronic surveys. The survey consists of 25 true-or-false questions. You need to perform the following tasks:  
Initialize each answer to true.Minimize the amount of memory used by each survey.  
Which storage option should you choose?

- A. `BitVector32^ answers = gcnew BitVector32(1);`
- B. `BitVector32^ answers = genew BitVector32(-1);`
- C. `BitArray^ answers = gcnew BitArray (1);`
- D. `BitArray^ answers = gcnew BitArray(-1);`

**Answer: B**

**Explanation:**

C & D BitVector32 is more efficient than a BitArray when 32 or less binary flags are required. Primarily because it is a value type.

Note: we are not sure why B is preferred to A.

**Question: 319**

You are developing a server application that will transmit sensitive information on a network. You create an X509Certificate object named certificate and a TcpClient object named client.

You need to create an SslStream to communicate by using the Transport Layer Security 1.0 protocol. Which code segment should you use?

- A. `SslStream^ ssl = gcnew SslStream(Client->GetStream());  
ssl->AuthenticateAsServer(certificate, false, SslProtocols::None, true);`
- B. `Ssl Stream ^ssl = gcnew SslStream(Client->GetStream());  
ssl->AuthenticateAsServer(certificate, false, SslProtocols::Ssl3, true);`
- C. `SslStream ^ssl = gcnew SslStream(Client->GetStream());  
ssl->AuthenticateAsServer(certificate, false, SslProtocols::Ssl2, true);`
- D. `SslStream ^ssl = genew SslStream(Client->GetStream());  
ssl->AuthenticateAsServer(certificate, false, SslProtocols::Tls, true);`

**Answer: D**

**Question: 320**

You are writing a method that returns an ArrayList named al. You need to ensure that changes to the ArrayList are performed in a thread-safe manner. Which code segment should you use?

- A. `ArrayList^ al = gcnew ArrayList();  
lock (al->SyncRoot){  
return al;  
}`
- B. `ArrayList^ al = gcnew ArrayList();  
lock (al->SyncRoot.GetType()){  
return al;  
}`
- C. `ArrayList^ al = gcnew ArrayList();  
Monitor::Enter(al);  
Monitor::Exit(al);  
return al;`
- D. `ArrayList^ al = gcnew ArrayList();  
ArrayList^ sync_al = ArrayList::Synchronized(al);  
return sync_al;`

**Answer: D**

**Explanation:**

A & C the lock will be released when the method returns.  
B Does not lock the arraylist but attempts to lock its type.

**Question: 321**

You are changing the security settings of a file named MyData.xml. You need to preserve the existing inherited access rules. You also need to prevent the access rules from inheriting changes in the future. Which code segment should you use?

- A. `FileSecurity^ security = gcnew FileSecurity("mydata.xml", AccssControlSections::All); security->SetAccessRuleProtection(true, true); File::SetAccessControl("mydata.xml", security);`
- B. `FileSecurity^ security = gcnew FileSecurity(); security->SetAccessRuleProtection(true, true); File::SetAccessControl("mydata.xml", security);`
- C. `FileSecurity^ security = File::GetAccessControl("mydata.xml"); security->SetAccessRuleProtection(true, true);`
- D. `FileSecurity^ security = File::GetAccessControl("mydata.xml"); security->SetAuditRuleProtection(true, true); File::SetAccessControl("mydata.xml", security);`

**Answer: A****Explanation:**

Retrieve the full access control list for the file, prevent access rules from inheriting in the future by calling `Security.SetAccessRuleProtection()`. Finally call `File.SetAccessControl()` to apply the amended `FileSecurity` to the file.

B does not preserve the existing access rules. It overwrites them.

C does not apply the amended `FileSecurity` object back to the file.

D `FileSecurity.SetAuditRuleProtection()` is used for controlling audit rules not access rules.

**Question: 322**

You write the following code to implement the `CompanyClass.MyMethod` function.

```
public class CompanyClass {
 public int MyMethod(int arg) {
 return arg;
 }
}
```

You need to call the `CompanyClass.MyMethod` function dynamically from an unrelated class in your assembly. Which code segment should you use?

- A. `CompanyClass^ myClass = gcnew CompanyClass(); Type^ t = CompanyClass::typeid; MethodInfo^ m = t->GetMethod("MyMethod");`

```

int i =(int)m->Invoke(this, gcnew array<Objcet^> { 1 });
B. CompanyClass^ myClass gcnew CompanyCass();
Type^ t = CompanyClass::typeid;
MethodInfo^ m = t->GetMethod("MyMethod");
int i =(int)m->Invoke(myClass, gcnew array<Object^> { 1 });
C. CompanyClass^ myClass = gcnew CompanyC1ass();
Type^ t = CompanyClass::typeid;
MethodInfo^ m = t->GetMethod("CompanyClass.MyMethod");
int i = (int)m->Invoke(myC1ass, gcnew array<Object^> { 1 });
D. Type^ t = Type::GetType("CompanyClass");
MethodInfo^ m = t->GetMethod("MyMethod");
int i =(int)m->Invoke(this, gcnew array<()bjcet^> { 1 });

```

**Answer: B**

**Explanation:**

Use reflection to get MethodInfo object that corresponds to the MyMethod member function. Call the Invoke() method of MethodInfo

A & D the Invoke method requires the object that the method will fire upon if its an instance method. myClass should have been passed.

C the getMethod() does not require the classname .

**Question: 323**

You are creating a class to compare a specially-formatted string. The default collation comparisons do not apply. You need to implement the IComparable<string> interface. Which code segment should you use?

```

A. public class Person : IComparable<string>{
public int CompareTo(string other){
}}
B. public class Person : IComparable<string>{
public int CompareTo(object other){
}}
C. public class Person : IComparable<string>{
public bool CompareTo(string other){
}}
D. public class Person : IComparable<string>{
public bool CompareTo(object other){
}}

```

**Answer: A**

**Question: 324**

You create a class library that contains the class hierarchy defined in the following code segment. (Line numbers are included for reference only.)

```

01 public class Group {

```

```

02 public Employee[] Employees;
03 }
04 public class Employee {
05 public string Name;
06 }
07 public class Manager : Employee {
08 public int Level;
09 }

```

You create an instance of the Group class. You populate the fields of the instance. When you attempt to serialize the instance by using the Serialize method of the XmlSerializer class, you receive InvalidOperationException. You also receive the following error message: "There was an error generating the XML document."

You need to modify the code segment so that you can successfully serialize instances of the Group class by using the XmlSerializer class. You also need to ensure that the XML output contains an element for all public fields in the class hierarchy. What should you do?

A. Insert the following code between lines 1 and 2 of the code segment:

```

[XmlArrayItem(Type = typeof(Employee))]
[XmlArrayItem(Type = typeof(Manager))]

```

B. Insert the following code between lines 1 and 2 of the code segment:

```

[XmlElement(Type = typeof(Employees))]

```

C. Insert the following code between lines 1 and 2 of the code segment:

```

[XmlArray(ElementName="Employees")]

```

D. Insert the following code between lines 3 and 4 of the code segment:

```

[XmlElement(Type = typeof(Employee))]

```

And

Insert the following code between lines 6 and 7 of the code segment:

```

[XmlElement(Type = typeof(Manager))]

```

**Answer: A**

### Question: 325

You are writing a method to compress an array of bytes. The bytes to be compressed are passed to the method in a parameter named document.

You need to compress the contents of the incoming parameter.

Which code segment should you use?

A. MemoryStream^ inStream = gcnew MemoryStream(document);

```

GZipStream^ zipStream = gcnew GZipStream(inStream,
CompressionMode::Compress);

```

```

array<Byte>^ result = gcnew array<Byte>(document->Length);

```

```

zipStream->Write(result, 0, result->Length);

```

```

return result;

```

B. MemoryStream^ stream = gcnew MemoryStream(document);

```

GZipStream^ zipStream = gcnew GZipStream(stream,
CompressionMode::Compress);

```

```

zipStream->Write(document, 0, document->Length);
zipStream->Close();
return stream->ToArray();
C. MemoryStream^ outputStream = gcnew MemoryStream();
GZipStream^ zipStream = gcnew GZipStream(outputStream,
CompressionMode::Compress);
zipStream->Write(document, 0, document->Length);
zipStream->Close();
return outputStream->ToArray();
D. MemoryStream^ inputStream = gcnew MemoryStream(document);
GZipStream^ zipStream = gcnew GZipStream(inputStream,
CompressionMode::Compress);
MemoryStream^ outputStream = gcnew MemoryStream();
int b;
while ((b = zipStream->ReadByte()) != -1) {
outputStream->WriteByte((Byte)b);
}
return outputStream->ToArray();

```

**Answer: C**

### Question: 326

You create a method that runs by using the credentials of the end user. You need to use Microsoft Windows groups to authorize the user. You must add a code segment that identifies whether a user is in the local group named Clerk. Which code segment should you use?

```

A. WindowsIdentity^ currentUser = WindowsIdentity::GetCurrent();
For each (IdentityReference^ grp in currentUser->Groups) {
NTAccount^ grpAccount =
safe_cast<NTAccount^>(grp->Translate(NTAccount::typeid));
isAuthorized = grpAccount->Value->Equals(
Environment::MachineName + "\\Clerk");
if (isAuthorized) break;
}
B. WindowsPrincipal^ currentUser =
safe_cast<WindowsPrincipal^>(Thread::CurrentPrincipal);
isAuthorized = currentUser->IsInRole("Clerk");
C. GenericPrincipal^ currentUser =
safe_cast<GenericPrincipal^>(Thread::CurrentPrincipal);
isAuthorized = currentUser->IsInRole("Clerk");
D. WindowsPrincipal^ currentUser =
safe_cast<WindowsPrincipal^>(Thread::CurrentPrincipal);
isAuthorized = currentUser->IsInRole(
Environment::MachineName);

```

**Answer: B**

**Explanation:**

To check the role membership of the current windows user, use the `IsInRole()` method of the `WindowsPrincipal` in the current thread.

A it is a lot more complicated to iterate through all the groups the user belongs to and checking for matches. The `Principal` classes are for this very purposes and should be used.

C uses `GenericPrincipal`. `WindowsPrincipal` should be used for windows accounts. There is an invalid cast from `WindowsPrincipal` to `GenericPrincipal`.

D does not specify the group correctly.

### Question: 327

You write a class named `Employee` that includes the following code segment. public ref

```
class Employee{
String^ employeeId;
String^ employeeName;
String^ jobTitleName;
public:
String^ GetName() { return employeeName;
}
String^ GetJobTitle() { return jobTitleName;
}
```

You need to expose this class to COM in a type library. The COM interface must also facilitate forward-compatibility across new versions of the `Employee` class. You need to choose a method for generating the COM interface.

What should you do?

A. Add the following attribute to the class

definition.[ClassInterface(ClassInterfaceType::None)]public class Employee {

B. Add the following attribute to the class

definition.[ClassInterface(ClassInterfaceType::AutoDual)]public class Employee {

C. Add the following attribute to the class definition.[ComVisible(true)]public class Employee {

D. Define an interface for the class and add the following attribute to the class

definition.[ClassInterface(ClassInterfaceType::None)]public class Employee : IEmployee {

**Answer: D**

### Question: 328

You are developing a method to hash data for later verification by using the MD5 algorithm. The data is passed to your method as a byte array named `message`. You need to compute the hash of the incoming parameter by using MD5. You also need to place the result into a byte array.

Which code segment should you use?

A. `HashAlgorithm ^algo = HashAlgorithm::Create("MD5");`

`hash = algo->ComputeHash(message);`

B. `HashAlgorithm ^algo = HashAlgorithm::Create("MD5");`

`hash = BitConverter::GetBytes(algo->GetHashCode());`

C. `HashAlgorithm ^algo;`

```

algo = HashAlgorithm::Create(message->ToString());
hash = algo->Hash;
D. HashAlgorithm ^algo = HashAlgorithm::Create("MD5");
hash = nullptr;
algo->TransformBlock(message, 0, message->Length, hash, 0);

```

**Answer: A**

**Explanation:**

Create a HashAlgorithm object based on the MD5 algorithm and call the ComputerHash method that will return the hash as an array of bytes.

B GetHashCode() will call the method inherited from object, it will not hash the message.

C The parameter of the Create method should specify the type of hashing algorithm to use not the message to be hashed.

D TransferBlock is more appropriate for hashing part of a message. Also it should be called with TransferEndBlock.

**Question: 329**

You are developing a method that searches a string for a substring. The method will be localized to Italy.

Your method accepts the following parameters: The string to be searched, which is named searchListThe string for which to search, which is named searchValue You need to write the code. Which code segment should you use?

```

A. return searchList->IndexOf(searchValue);
B. CompareInfo^ comparer =
 gcnew CultureInfo("it-IT")::CompareInfo;
 return comparer->Compare(searchList, search Value);
C. CultureInfo^ comparer = gcnew CultureInfo("it-IT");
 if (searchList->IndexOf(searchValue)
 > 0) {
 return true;
 } else {
 return false;
 }
D. CompareInfo^ comparer =
 gcnew CultureInfo("it-IT")::ComparerInfo;
 if (comparer->IndexOf(searchList,
 searchValue) > 0) {
 return true;
 } else {
 return false;
 }

```

**Answer: D**

**Question: 330**

You are creating a class named Age.

You need to ensure that the Age class is written such that collections of Age objects can be sorted. Which code segment should you use?

```
A. public class Age {
 public int Value;
 public object CompareTo(object obj) {
 if (obj is Age) {
 Age_age = (Age) obj;
 return Value.CompareTo(obj);
 }
 throw new ArgumentException("object not an Age");
 }
}
```

```
B. public class Age {
 public int Value;
 public object CompareTo(int iValue) {
 try {
 return Value.CompareTo(iValue);
 } catch {
 throw new ArgumentException("object not an Age");
 }
 }
}
```

```
C. public class Age : IComparable {
 public int Value;
 public int CompareTo(object obj) {
 if (obj is Age) {
 Age_age = (Age) obj;
 return Value.CompareTo(_age.Value);
 }
 throw new ArgumentException("object not an Age");
 }
}
```

```
D. public class Age : IComparable {
 public int Value;
 public int CompareTo(object obj) {
 try {
 return Value.CompareTo(((Age) obj).Value);
 } catch {
 return -1;
 }
 }
}
```

**Answer: C**

**Question: 331**

You are developing a method to encrypt sensitive data with the Data Encryption Standard (DES) algorithm. Your method accepts the following parameters:

The byte array to be encrypted, which is named `message`  
An encryption key, which is named `key`  
An initialization vector, which is named `iv`

You need to encrypt the data. You also need to write the encrypted data to a `MemoryStream` object.

Which code segment should you use?

```
A. DES ^ des = gcnew DESCryptoServiceProvider();
des->BlockSize = message->Length;
ICryptoTransform ^ crypto = des->CreateEncryptor(key, iv);
MemoryStream ^ cipherStream = gcnew MemoryStream();
CryptoStream ^ cryptoStream = gcnew CryptoStream(cipherStream, crypto,
CryptoStreamMode::Write);
cryptoStream->Write(message, 0, message->Length);
B. DES ^ des = gcnew DESCryptoServiceProvider();
ICryptoTransform ^ crypto = des->CreateDecryptor(key, iv);
MemoryStream ^ cipherStream = gcnew MemoryStream();
CryptoStream ^ cryptoStream = gcnew CryptoStream(cipherStream, crypto,
CryptoStreamMode::Write);
cryptoStream->Write(message, 0, message->Length);
C. DES ^ des = gcnew DESCryptoServiceProvider();
ICryptoTransform ^ crypto = des->CreateEncryptor();
MemoryStream ^ cipherStream = gcnew MemoryStream();
CryptoStream ^ cryptoStream = gcnew CryptoStream(cipherStream, crypto,
CryptoStreamMode::Write);
cryptoStream->Write(message, 0, message->Length);
D. DES ^ des = gcnew DESCryptoServiceProvider();
ICryptoTransform ^ crypto = des->CreateEncryptor(key, iv);
MemoryStream ^ cipherStream = gcnew MemoryStream();
CryptoStream ^ cryptoStream = gcnew CryptoStream(cipherStream, crypto,
CryptoStreamMode::Write);
cryptoStream->Write(message, 0, message->Length);
```

**Answer: D**

**Explanation:**

Use the `DESCryptoServiceProvider` to create a new encryptor. Create a `CryptoStream` that encrypts directly to the `MemoryStream` and call the `Write()` method to perform the encryption.

A Uses a blocksize set to size of the entire message

B creates a decryptor instead of an encryptor.

C does not initialise the encryptor with the key and iv correctly.

**Question: 332**

You are developing a class library that will open the network socket connections to computers on the network. You will deploy the class library to the global assembly cache and grant it full trust.

You write the following code to ensure usage of the socket connections.

```
SocketPermission^ permission =
gcnew SocketPermission(PermissionState::Unrestricted);
permission->Assert();
```

Some of the applications that use the class library might not have the necessary permissions to open the network socket connections.

You need to cancel the assertion.

Which code segment should you use?

- A. `CodeAccessPermission::RevertAssert();`
- B. `CodeAccessPermission::RevertDeny();`
- C. `permission->Deny();`
- D. `permission->PermitOnly();`

**Answer: A**

**Explanation:**

`CodeAccessPermission.RevertAssert()` should be used to undo a previous `Assert` call.

B is used to revert a previous deny call.

C & D are used to reduce the CAS permissions, they do not undo a previous `Assert` call.

**Question: 333**

You are creating an undo buffer that stores data modifications. You need to ensure that the undo functionality undoes the most recent data modifications first. You also need to ensure that the undo buffer permits the storage of strings only. Which code segment should you use?

- A. `Stack<String^> undoBuffer = gcnew Stack<String^>();`
- B. `Stack undoBuffer = gcnew Stack();`
- C. `Queue<String^> undoBuffer = gcnew Queue<String^>();`
- D. `Queue undoBuffer = gcnew Queue();`

**Answer: A**

**Explanation:**

A Stack caters for a last in first out scenario similar to what is required in an undo buffer. By using Generics you can force a strongly typed collection that takes strings only.

B is not strongly typed for strings, it will take any type of object.

C & D Queue is a First in First out collection, it is not appropriate in this instance.

**Question: 334**

You need to create a method to clear a Queue named q. Which code segment should you use?

- A. 

```
for each (Object^ e in q) {
 q.Dequeue();
}
```

B. for each (Object<sup>e</sup> in q) {  
q.Enqueue(0);  
}  
C. q.Clear();  
D. q.Dequeue();

**Answer: C**

**Explanation:**

Simply call the Clear() method to empty a queue.

A Dequeueing all of the items in a queue will also serve the same affect but it is a lot more roundabout.

B attempts to re-queue items that are already in the queue

D will de-queue only one item that is at the front of the queue.

**Question: 335**

You are developing a custom event handler to automatically print all open documents.

The event handler helps specify the number of copies to be printed. You need to develop a custom event arguments class to pass as a parameter to the event handler.

Which code segment should you use?

A. public ref class PrintingArgs {  
public :  
int Copies;  
PrintingArgs (int numberOfCopies) {  
this->Copies = numberOfCopies;  
}};  
B. public ref class PrintingArgs : public EventArgs {  
public :  
int Copies;  
PrintingArgs(int numberOfCopies) {  
this->Copies = numberOfCopies;  
}};  
C. public ref class PrintingArgs {  
public :  
EventArgs Args;  
PrintingArgs(EventArgs ea) {  
this->Args = ea;  
}};  
D. public ref class PrintingArgs : public EventArgs {  
public :  
int Copies;  
};

**Answer: B**

**Explanation:**

The event handler will require a parameter of type EventArgs or a derived type. The derived type in this example will question states that the event handler helps specify the number of documents that require printing, this information will have to come from the derived EventArgs class in the form of an instance variable.

A & C do not derive from EventArgs hence cannot fit into the event handling model.  
D does not expose the copies instance variable.

**Question: 336**

You write the following custom exception class named CustomException.

```
public class CustomException : ApplicationException {
 public static int COR_E_ARGUMENT =
 unchecked((int)0x80070057);
 public CustomException(string msg) : base(msg) {
 HRESULT = COR_E_ARGUMENT;
 }
}
```

You need to write a code segment that will use the CustomException class to immediately return control to the COM caller. You also need to ensure that the caller has access to the error code. Which code segment should you use?

- A. return Marshal.GetExceptionForHR(CustomException.COR\_E\_ARGUMENT);
- B. return CustomException.COR\_E\_ARGUMENT;
- C. Marshal.ThrowExceptionForHR(CustomException.COR\_E\_ARGUMENT);
- D. throw new CustomException("Argument is out of bounds");

**Answer: D****Question: 337**

You create a class library that is used by applications in three departments of Company.com. The library contains a Department class with the following definition.

```
public class Department {
 public string name;
 public string manager;
}
```

Each application uses a custom configuration section to store department-specific values in the application configuration file as shown in the following code.

```
<Department>
<name>Hardware</name>
<manager>Company</manager>
</Department>
```

You need to write a code segment that creates a Department object instance by using the field values retrieved from the application configuration file. Which code segment should you use?

```

A. public class deptElement : ConfigurationElement {
protected override void DeserializeElement(
XmlReader reader, bool serializeCollectionKey) {
Department dept = new Department();
dept.name = ConfigurationManager.AppSettings["name"];
dept.manager =
ConfigurationManager.AppSettings["manager"];
return dept;
}}

B. public class deptElement: ConfigurationElement {
protected override void DeserializeElement(

XmlReader reader, bool serializeCollectionKey) {
Department dept = new Department();
dept.name = reader.GetAttribute("name");
dept.manager = reader.GetAttribute("manager");
}
}

C. public class deptHandler : IConfigurationSectionHandler {
public object Create(object parent, object configContext,
System.Xml.XmlNode section) {
Department dept = new Department();
dept.name = section.SelectSingleNode("name").InnerText;
dept.manager =
section.SelectSingleNode("manager").InnerText;
return dept;
}
}

D. public class deptHandler : IConfigurationSectionHandler {
public object Create(object parent, object configContext,
System.Xml.XmlNode section) {
Department dept = new Department();
dept.name = section.Attributes["name"].Value;
dept.manager = section.Attributes ["manager"] .Value;
return dept;
}
}

```

**Answer: C**

### Question: 338

You write the following custom exception class named CustomException.

```

public ref class CustomException : ApplicationException {public:
literal int COR_E_ARGUMENT = (int)0x80070057;
CustomException(String^ msg) : ApplicationException(msg)

```

```
{
HRESULT = COR_E_ARGUMENT;
}
};
```

You need to write a code segment that will use the CustomException class to immediately return control to the COM caller. You also need to ensure that the caller has access to the error code. Which code segment should you use?

- A. return Marshal::GetExceptionForHR(CustomException::COR\_E\_ARGUMENT);
- B. return CustomException::COR\_E\_ARGUMENT;
- C. Marshal::ThrowExceptionForHR(CustomException::COR\_E\_ARGUMENT);
- D. throw gcnew CustomException("Argument is out of bounds");

**Answer: D**

### Question: 339

You are writing a method to compress an array of bytes. The array is passed to the method in a parameter named document. You need to compress the incoming array of bytes and return the result as an array of bytes. Which code segment should you use?

- A. 

```
MemoryStream^ strm = gcnew MemoryStream(document);
DeflateStream^ deflate = gcnew DeflateStream(strm,
CompressionMode::Compress);
array<Byte>^ result = gcnew array<Byte>(document->Length);
deflate->Write(result, 0, result->Length);
return result;
```
- B. 

```
MemoryStream^ strm = gcnew MemoryStream(document);
DeflateStream^ deflate = gcnew DeflateStream(strm,
CompressionMode::Compress);
deflate->Write(document, 0, document->Length);
deflate->Close();
return strm->ToArray();
```
- C. 

```
MemoryStream^ strm = gcnew MemoryStream();
DeflateStream^ deflate = gcnew DeflateStream(strm,CompressionMode::Compress);
deflate->Write(document, 0, docunient->Length);
deflate->Close();
return strm->ToArray();
```
- D. 

```
Memory Stream^ inStream = gcnew MemoryStream(document);
DeflateStream^ deflate = gcnew DeflateStream(inStream,
CompressionMode::Compress);
MemoryStream^ outStream = gcnew MemoryStream()
int b;
while ((b = deflate->ReadByte()) != -1) {
outStream->WriteByte((Byte)b);
}
```

```
return outStream->ToArray();
```

**Answer: C**

**Explanation:**

The document is compressed and written to a new MemoryStream using the Deflate class. Finally the compressed data can be returned as an array of bytes using the ToArray method of the MemoryStream.

A does not compress and write the document, instead it is compressing and writing an empty array

B & D are reading and writing to the same document.

**Question: 340**

You are writing a custom dictionary. The custom-dictionary class is named MyDictionary. You need to ensure that the dictionary is type safe.

Which code segment should you use?

A. public ref class MyDictionary : public Dictionary<String^, String^>{};

B. public ref class MyDictionary : public Hashtable{};

C. public ref class MyDictionary : public IDictionary{};

D. public ref class MyDictionary{};

Dictionary<String^, String^> t = gcnew Dictionary<String^, String^>();

MyDictionary dictionary = (MyDictionary)t;

**Answer: A**

**Question: 341**

You develop a service application named FileService. You deploy the service application to multiple servers on your network. You implement the following code segment. (Line numbers are included for reference only.)

```
01 public :
```

```
02 void StartService(String^ serverName){
```

```
03
```

```
04 ServiceController^ ctrl = gcnew
```

```
05 ServiceController("FileService");
```

```
06 if (ctrl->Status == ServiceControllerStatus::Stopped){}
```

```
07 }
```

You need to develop a routine that will start FileService if it stops. The routine must start

FileService on the server identified by the serverName input parameter.

Which two lines of code should you add to the code segment? (Each correct answer presents part of the solution. Choose two.)

A. Insert the following line of code between lines 03 and 04:ctrl.ServiceName = serverName;

B. Insert the following line of code between lines 03 and 04:ctrl.MachineName = serverName;

C. Insert the following line of code between lines 03 and 04:ctrl.Site.Name = serverName;

D. Insert the following line of code between lines 04 and 05:ctrl.Continue();

E. Insert the following line of code between lines 04 and 05:ctrl.Start();

F. Insert the following line of code between lines 04 and 05:ctrl.ExecuteCommand(0);

**Answer: B, E**

**Explanation:**

The ServiceController is capable of controller services on other computers, the MachineName should be specified. The service should be started with the Start() method if it is in the stopped state.

Setting the ServiceName to the machine name is incorrect.

No such property as SiteName

Continue cannot re-start a stopped service only a paused one.

ExecuteCommand is used to fire a custom command on the service.

**Question: 342**

You are loading a new assembly into an application. You need to override the default evidence for the assembly. You require the common language runtime (CLR) to grant the assembly a permission set, as if the assembly were loaded from the local intranet zone.

You need to build the evidence collection. Which code segment should you use?

A. Evidence^ evidence = gcnew

Evidence(Assembly::GetExecutingAssembly()->Evidence);

B. Evidence^ evidence = gcnew Evidence();

evidence->AddAssembly(gcnew Zone(SecurityZone::Intranet));

C. Evidence^ evidence = gcnew Evidence();

evidence->AddHost(gcnew Zone(SecurityZone::Intranet));

D. Evidence^ evidence = gcnew Evidence(AppDomain::CurrentDomain->Evidence);

**Answer: C**

**Explanation:**

Use the evidence.AddHost method to add Zone evidence.

A simply gets the evidence of the Executing Assembly and assigns it to a new object, the question explicitly wants Intranet zone evidence.

B Adds assembly evidence, the question asks for host evidence because it is concerned with where the assembly was loaded from.#

D does not create an Evidence object with Intranet zone evidence.