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Objectives

A.	Creating User Services
B.	Creating and Managing Components and .NET Assemblies
C.	Consuming and Manipulating Data
D.	Testing and Debugging
E.	Deploying a Windows-based Application
F.	Maintaining and Supporting a Windows-based Application
G.	Configuring and Securing a Windows-based Application

Ö Relevent objective of each question is mentioned with question number.

Question: 1. (A)

You develop a Windows-based application. Its users will view and edit employee attendance data. The application uses a DataSet object named customDataSet to maintain the data while users are working with it.

After a user edits data, business rule validation must be performed by a middle-tier component named myComponent. You must ensure that your application sends only edited data rows from customDataSet to myComponent.

Which code segment should you use?

- A. Dim changeDataSet As New DataSet If customDataSet.HasChanges _ Then
myComponent.Validate(changeDataSet)
- B. Dim changeDataSet As New DataSet If customDataSet.HasChanges _ Then
myComponent.Validate(customDataSet).
- C. Dim changeDataSet AS DataSet = customDataSet.GetChanges()
myComponent.Validate(changeDataSet)
- D. Dim changeDataSet As DataSet = customDataSet.GetChanges() myComponent.Validate(customDataSet)

Answer: C

Explanation:

DataSet.GetChanges method gets a copy of the DataSet containing all changes made to it since it was last loaded, or since AcceptChanges was called. It is used to create a second DataSet that features only the changes to the data. We then validate the changes, the changedDataSet.

Reference:

.NET Framework Class Library, DataSet.GetChanges Method [Visual Basic] .NET Framework Class Library, DataSet Class [Visual Basic]

Incorrect AnswersA, B: We should create a dataset which contains only the changes.

D: We should validate only the changes, not the whole dataset customerDataSet.

Question: 2. (A)

You develop a Windows-based application XYZApp that includes several menus. Every top-level menu contains several menu items, and certain menus contain items that are mutually exclusive.

You decide to distinguish the single most important item in each menu by changing its caption text to bold type.

What should you do?

- A. Set the `DefaultItem` property to **True**.
- B. Set the `Text` property to “True”.
- C. Set the `Checked` property to **True**.
- D. Set the `OwnerDraw` property to **True**.

Answer: A

Explanation:

Gets or sets a value indicating whether the menu item is the default menu item. The default menu item for a menu is boldfaced.

Reference:

.NET Framework Class Library, `MenuItem.DefaultItem` Property [Visual Basic]

Incorrect Answers

B: The `Text` property contains the text that is associated with the control. We cannot format this text by HTML-like tags in the text.

C: We don't want the menu-item to be selected, just bold.

D: When the `OwnerDraw` property is set to true, you need to handle all drawing of the menu item. You can use this capability to create your own special menu displays.

Question: 3. (A)

You use Visual Studio .NET to create a Windows-based application for online gaming. Each user will run the client version of the application on his or her local computer. In the game, each user controls two groups of soldiers, Group 1 and group 2.

You create a top-level menu item whose caption is Groups. Under this menu, you create two submenus.

One is named `group1Submenu`, and its caption is Group 1. The other is named `group2Submenu`, and its caption is Group2. When the user selects the Groups menu. The two submenus will be displayed. The user can select only one group of soldiers at a time.

You must ensure that a group can be selected either by clicking the appropriate submenu item or by holding down the ALT key and pressing 1 or 2. You must also ensure that the group currently select will be indicated by a dot next to the corresponding submenu item. You do not want to change the caption text of any of your menu items.

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

- A. Set `group1Submenu.Text` to "Group &1". Set `group2Submenu.Text` to "Group &2".
- B. Set `Group1.ShortCut` to "ALT1". Set `Group2.ShortCut` to "ALT2".
- C. In the `group1Submenu.Click` event, place the following code segment: `group1Submenu.DefaultItem = True` In the `group2Submenu.Click` event, place the following code segment: `group2Submenu.DefaultItem = True`
- D. In the `group1Submenu.Click` event, place the following code segment: `group2Submenu.DefaultItem = False` In the `group2Submenu.Click` event, place the following code segment: `group1Submenu.DefaultItem = False`
- E. In the `group1Submenu.Click` event, place the following code segment: `group1Submenu.Checked = True` In the `group2Submenu.Click` event, place the following code segment: `group2Submenu.Checked = True`
- F. In the `group1Submenu.Click` event, place the following code segment: `group2Submenu.Checked = False` In the

group2Submenu.Click event, place the following code segment: group1Submenu.Checked = False

G. Set group1Submenu.RadioCheck to True. Set

group2Submenu.RadioCheck to True.

H. Set group1Submenu.RadioCheck to False. Set group2Submenu.RadioCheck to False.

Answer: B, E, F& G

Explanation:

B: Simply set the Group1.Shortcut to appropriate value. **E, F:** The menu item's Checked property is either true or false, and indicates whether the menuitem is selected. We should set the clicked Submenu Checked property to True, and the other Submenu Checked property to False.

G: The menu item's RadioCheck property customizes the appearance of the selected item: if RadioCheck is set to true, a radio button appears next to the item;

Reference:

Visual Basic and Visual C# Concepts, Adding Menu Enhancements to Windows Forms Visual Basic and Visual C# Concepts, Introduction to the Windows Forms MainMenu Component

Incorrect Answers

A: You do not want to change the caption text of any of your menu items. **C, D:** We are not interested in defining default items. We want to mark items as checked.

H: The RadioCheck property must be set to True for both menu items.

Question: 4. (A)

You use Visual Studio .NET to develop a Windows-based application that will manager vendor contracts.

You create a DataSet object, along with its associated DataTable object and DataView object.

The DataSet object contains all data available for a single contract. This data is displayed in a DataGrid control. After all parties sign a contract, the value in a field named ContractEXApproved is set to True.

Business rules prohibit changes to database information about a contract when the ContractEXApproved value associated with the contract is true.

You must ensure that this business rule is enforces by your application code.

What should you do?

A. Set the AllowNew property of the DataSet object to False.

B. Set the AllowEdit property of the DataView object to False.

C. Call the EndEdit method of the DataTable object.

D. Call the EndEdit method of the DataRow object.

Answer: B

Question: 5. (A)

As a software developer at XYZ you use Visual Studio .NET to create a Windows-based application.

The application enables users to update customer information that is stored in a database. Your application contains several text boxes. All TextBox controls are validated as soon as focus is transferred to another control. However, your validation code does not function as expected. To debug the application, you place the following line of code in the Enter event handler for the first text box: `Trace.WriteLine ("Enter")`

You repeat the process for the Leave, Validated, Validating, and TextChanged events. In each event, the text is displayed in the output window contains the name of the event being handled.

You run the application and enter a value in the first TextBox control. Then you change focus to another control to force the validation routines to run.

Which code segment will be displayed in the Visual Studio .NET output windows?

- A. Enter Validating TextChanged Leave Validated
- B. Enter TextChanged Leave Validating Validated
- C. Enter Validating Validated TextChanged Leave
- D. Enter TextChanged Validating Validated Leave
- E. Enter Validating TextChanged Validated Leave

Answer: B

Question: 6. (A)

You use Visual Studio .NET to develop a Windows-based application. Your application includes a form named XYZInformationForm, which enables users to edit information stored in a database. All user changes to this information must be saved in the database.

You need to write code that will prevent XYZInformationForm from closing if any database changes are left unsaved. What should you do?.

- A. Include `Me.Activate` in the Closing event handler of XYZInformationForm.
- B. Include `Me.Activate` in the Closed event handler of XYZInformationForm.
- C. Include `Me.Activate` in the Leave event handler of XYZInformationForm.
- D. Change a property of the `System.ComponentModel.CancelEventArgs` parameter in the Closing event handler of XYZInformationForm.
- E. Change a property of the `System.EventArgs` parameter in the Closed event handler of XYZInformationForm.
- F. Change a property of the `System.EventArgs` parameter in the Leave event handler of XYZInformationForm.

Answer: D

Explanation:

The `CancelEventArgs` Class Provides data for a cancelable event. A cancelable event is raised by a component when it is about to perform an action that can be canceled, such as the Closing event of a Form.

Reference:

NET Framework Class Library, `CancelEventArgs` Class [Visual Basic] Visual Studio, `Activate` Method (General Extensibility) [Visual Basic]

Incorrect Answers

- A:** A closing event of a form cannot be cancelled with a `this.activate` statement.
- B:** It is too late when the Closed event occurs.
- C:** A form is not closing, just losing focus, when the Leave event occurs.

E: It is too late when the Closed event occurs.

F: A form is not closing, just losing focus, when the Leave event occurs.

Question: 7. (A)

You use Visual Studio .NET to create a Windows-based application for XYZ Inc. The application includes a form that contains several controls, including a button named exitButton. After you finish designing the form, you select all controls and then select Lock Controls from the Format menu.

Later, you discover that exitButton is too small. You need to enlarge its vertical dimension with the least possible effort, and without disrupting the other controls.

First you select exitButton in the Windows Forms Designer. What should you do next?

- A. Set the Locked property to False. Set the Size property to the required size. Set the Locked property to True.
- B. Set the Locked property to False. Use the mouse to resize the control.
Set the Locked property to True.
- C. Set the Size property to the required size.
- D. Use the mouse to resize the control.

Answer: C

Question: 8. (A)

You use Visual Studio .NET to create a form that includes a submenu item named helpEXOption. In the Click event handler for helpEXOption, you write code to open a Web browser loaded with a context-sensitive Help file.

You add a ContextMenu item named ContextMenu1 to the form. ContextMenu1 will be used for all controls on the form.

Now you need to add code to the Popup event handler for ContextMenu1. Your code will create a popup menu that offers the same functionality as helpEXOption. You want to use the minimum amount of code to accomplish this goal.

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

- A. ContextMenu1.MenuItems.Clear()
- B. ContextMenu1.MenuItems.Add("&Display Help")
- C. ContextMenu1.MenuItems.Add(helpEXOption.CloneMenu())
- D. ContextMenu1.MenuItems[0].Click += new
System.EventHandler(helpEXOption_Click)
- E. ContextMenu1.Popup += new System.EventHandler(helpEXOption_Click)

Answer: A & C

Question: 9. (A)

You develop a kiosk application that enables users to register for an e-mail account in the XYZ.com domain. Your application contains two TextBox controls named textName and textEmail.

Your application is designed to supply the value of textEmail automatically. When a user enters a name in the textName, an e-mail address is automatically assigned and entered in textEmail. The ReadOnly property of textEmail is set to true. Your database will store each user's name. It can hold a maximum of 100 characters for each name.

However, the database can hold a maximum of only 34 characters for each e-mail address. This limitation allows 14 characters for your domain, @proseware.com, and 20 additional characters for the user's name.

If a user enters a name longer than 20 characters, the resulting e-mail address will contain more characters than the database

allows.

You cannot make any changes to the database schema.

You enter the following in the Leave event handler of `txtName.txtEmail.Text = txtName.Replace (" ", ".")? "@XYZ.com";`.

Now you must ensure that the automatic e-mail address is no longer than 34 characters. You want to accomplish this goal by writing the minimum amount of code and without affecting other fields in the database.

What should you do?

- A. Set the `txtName.Size` property to "1,20".
- B. Set the `txtEmail.Size` property to "1,34".
- C. Set the `txtName.AutoSize` property to `True`.
- D. Set the `txtEmail.AutoSize` property to `True`.
- E. Set the `txtName.MaxLength` property to 20.
- F. Set the `txtEmail.MaxLength` property to 34.
- G. Change the code in `txtName_Leave` to ensure that only the first 20 characters of `txtName.Text` are used.
- H. Use an `ErrorProvider` control to prompt a revision if a user enters a name longer than 20 characters.

Answer: G

Question: 10. (A)

As a developer at XYZ you develop a new sales analysis application that reuses existing data access components. One of these components returns a `DataSet` object that contains the data for all customer orders for the previous year.

You want your application to display orders for individual product numbers. Users will specify the appropriate product numbers at run time.

What should you do?

- A. Use the `DataSet.Reset` method.
- B. Set the `RowFilter` property of the `DataSet` object by using a filter expression.
- C. Create a `DataGridView` object and set the `RowFilter` property by using a filter expression.
- D. Create a `DataGridView` object and set the `RowStateFilter` property by using a filter expression..

Answer: C

Explanation:

You filter data by setting the `RowFilter` property. The `RowFilter` property takes a `String` that can evaluate to an expression to be used for selecting records. `RowFilter` is a property of the `DataGridView` object.

Reference:

Visual Basic and Visual C# Concepts, Filtering and Sorting Data Using Data Views

Incorrect Answers

A: The `DataSet.Reset` method resets the `DataSet` to its original state.

B: `RowFilter` is not a property of the `DataSet` object.

D: The `RowStateFilter` property is used to filter based on a version or state of a record. Filter expressions cannot be used on

RowStateFilters. The RowStates are Added, CurrentRows, Deleted, ModifiedCurrent, ModifiedOriginal, None, OriginalRows, and Unchanged.

Question: 11. (A)

You use Visual Studio .NET to create an application for 100 users for the XYZ support department.

The users run a variety of operating systems on a variety of hardware. You plan to create a distribution package for your application.

Your application includes several Windows Forms with many controls on each. You must ensure that the Windows Forms will launch as quickly as possible on client computers. You must not adversely affect the functionality of the application.

What should you do?

- A. Set the Compression property of the setup project to Optimized for Speed. Then build your distribution package.
- B. For each Windows Form in your application, set the CausesValidation property to False.
- C. Use the Native Image Generator (Ngen.exe) to precompile your application. Add the precompiled application to your distribution package.
- D. Add a custom action to your setup project to precompile your application during installation.

Answer: D

Question: 12. (A)

You develop a Windows-based application. The application uses a DataSet object that contains two DataTable objects. The application will display data from the two data tables. One table contains customer information, which must be displayed in a data-bound ListBox control. The other table contains order information, which must be displayed in a DataGrid control. You need to modify your application to enable the list box functionality. What should you do?

- A. Use the DataSet.Merge method.
- B. Define primary keys for the DataTable objects.
- C. Create a foreign key constraint on the DataSet object.
- D. Add a DataRelation object to the Relation collection of the DataSet object.

Answer: D

Explanation:

You can use a DataRelation to retrieve parent and child rows. Related rows are retrieved by calling the GetChildRows or GetParentRow methods of a DataRow.

Note:

A DataRelation object represents a relationship between two columns of data in different tables. The DataRelation objects of a particular DataSet are contained in the Relations property of the DataSet. A DataRelation is created by specifying the name of the DataRelation, the parent column, and the child column.

Reference:

70-306/70-316 Training kit, Retrieving Related Records, Page 286

Incorrect Answers

A: The Merge method is used to merge two DataSet objects that have largely similar schemas. A merge does not meet the

requirements of the scenario however.

B: Primary keys would not help relating the DataTable objects.

C: Foreign key constraints put restrictions on the data in two different tables. However, it would not help in retrieving related records.

Question: 13. (A)

You use Visual Studio .NET to develop a Windows-based application that contains a single form. This form contains a Label control named labelEXValue and a TextBox control named textEXValue.

labelEXValue displays a caption that identifies the purpose of textEXValue.

You want to write code that enables users to place focus in textEXValue when they press ALT+V. This key combination should be identified to users in the display of labelEXValue.

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

- A. Set labelEXValue.UseMnemonic to **True**.
- B. Set labelEXValue.Text to **"&Value"**.
- C. Set labelEXValue.CausesValidation to **True**.
- D. Set textEXValue.CausesValidation to **True**.
- E. Set textEXValue.TabIndex to exactly one number less than labelValue.TabIndex.
- F. Set textEXValue.TabIndex to exactly one number more than labelValue.TabIndex.
- G. Set textEXValue.Location so that textValue overlaps with labelValue on the screen.
- H. Add the following code to the Load event of MainForm: `text.Value.Controls.Add (labelValue);`

Answer: A, B & F

Explanation:

If the UseMnemonic property is set to true (A) and a mnemonic character (a character preceded by the ampersand) is defined in the Text property of the Label (B), pressing ALT+ the mnemonic character sets the focus to the control that follows the Label in the tab order (F). You can use this property to provide proper keyboard navigation to the controls on your form.

Note1 The UseMnemonic property gets or sets a value indicating whether the control interprets an ampersand character (&) in the control's Text property to be an access key prefix character. UseMnemonic is set to True by default.

Note 2: As a practice verify the answer yourself.

Reference:

NET Framework Class Library, Label.UseMnemonic Property [Visual Basic]

Incorrect Answers C, D: The CausesValidation setting has no effect in this scenario.

E: The Text control must use a tabindex that is the successor to the tabindex of the label control. **G, H:** This is not necessary. It has no effect here.

Question: 14. (A)

You create a Windows Form named XYZForm. The form enables users to maintain database records in a table named XYZ.

You need to add several pairs of controls to XYZForm. You must fulfill the following requirements:

- Each pair of controls must represent one column in the XYZ table.
- Each pair must consist of a TextBox control and a Label control.
- The LostFocus event of each TextBox control must call a procedure named UpdateDatabase.
- Additional forms similar to XYZForm must be created for other tables in the database.

Application performance must be optimized.
The amount of necessary code must be minimized.

What should you do?

- A. Create and select a TextBox control and a Label control. Write the appropriate code in the LostFocus event of the TextBox control. Repeatedly copy and paste the controls into XYZForm until every column in the XYZ table has a pair of controls. Repeat this process for the other forms.
- B. Add a TextBox control and a Label controls to XYZForm. Write the appropriate code in the LostFocus event of the TextBox control. Create a control array from the TextBox control and the Label control. At run time, add additional pairs of controls to the control array until every column in the XYZ table has a pair of controls. Repeat this process for the other forms.
- C. Create a new user control that includes a TextBox control and a Label control. Write the appropriate code in the LostFocus event of the TextBox control. For each column in the XYZ table, add one instance of the user control to the XYZForm. Repeat this process for the other forms.
- D. Create a new ActiveX control that includes a TextBox control and a Label control. For each column in the XYZ table, add one instance of the ActiveX control to XYZForm. Repeat this process for the other forms.

Answer: C

Explanation:

We combine multiple Windows Form controls into a single control, called user control. This is the most efficient solution to reuse functionality in this scenario.

Note:

Sometimes, a single control does not contain all of the functionality you need. For instance, you might want a control that you can bind to a data source to display a first name, last name, and phone number, each in a separate TextBox. Although it is possible to implement this logic on the form itself, it might be more efficient to create a single control that contains multiple text boxes, especially if this configuration is needed in many different applications. Controls that contain multiple Windows Forms controls bound together as a single unit are called user controls.

Reference:

70-306/70-316 Training kit, Inheriting from UserControl, Page 345

Incorrect Answers

- A:** Only the controls, not the code of the control will be copied.
- B:** This is not the best solution. With a user control we could avoid writing code that are executed at run time.
- D:** ActiveX controls should be avoided in Visual Studio .NET. They are less efficient.

Question: 15. (A)

You use Visual Studio .NET to develop a Windows-based application. Your application will display customer order information from a Microsoft SQL Server database. The orders will be displayed on a Windows Form that includes a DataGrid control named XYZGrid1. XYZGrid1 is bound to a DataView object. Users will be able to edit order information directly in XYZGrid1.

You must give users the option of displaying only edited customer orders and updated values in XYZGrid1.

What should you do?

- A. Set the RowStateFilter property of the DataView object to DataViewRowState.ModifiedOriginal.
- B. Set the RowStateFilter property of the DataView object to DataViewRowState.ModifiedCurrent.
- C. Set the RowFilter property of the DataView object to DataViewRowState.ModifiedOriginal.

D. Set the RowFilter property of the DataView object to DataRowState.ModifiedCurrent.

Answer: B

Explanation:

We must set the RowStateFilter property of the DataView to specify which version or versions of data we want to view. We should use the ModifiedCurrent. DataRowState which provides the modified version of original data.

Reference:

.NET Framework Class Library, DataRowState Enumeration [Visual Basic]

Incorrect Answers A, C: The ModifiedOriginal DataRowState is used to get the original version of the rows in the view. We are interested in the modified rows however.

D: We are not applying an usual filter with the RowFilter property. We must use a RowStateFilter.

Question: 16. (A)

You need to create an OleDbCommand object to retrieve information about postal codes for your mailing list application. You create an OleDbConnection object named conn.

You need to instantiate the OleDbCommand object and set the CommandText and Connection properties.

What are two possible code segments for you to use? (Each correct answer presents a complete solution. Choose two)

- A. Dim comm As New OleDbCommand() comm.CommandText = "SELECT * FROM Regions" comm.Connection = conn
- B. Dim comm. As New OleDbCommand("sp_GetRegions", conn) comm.CommandType = CommandType.Text
- C. Dim comm As New OleDbCommand("SELECT * FROM Regions", _
conn)
comm.CommandType = CommandType.Text
- D. Dim comm As New OleDbCommand("sp_GetRegions", conn) comm.CommandType = CommandType.TableDirect
- E. Dim comm As New OleDbCommand() comm.CommandType = "SELECT * FROM Regions" comm.Connection = conn

Answer: A & C

Explanation:

A: The CommandText property of the OleDbCommand gets or sets the SQL statement or stored procedure to execute at the data source. The Connection property of the OleDbCommand gets or sets the OleDbConnection used by this instance of the OleDbCommand.

C: An OleDbCommand object is created correctly. The CommandType is set to Text which matches the SQL statement in the OleDbCommand object.

Reference:

.NET Framework Class Library, OleDbCommand Class [Visual Basic] .NET Framework Class Library, OleDbCommand Members
.NET Framework Class Library, CommandType Enumeration [Visual Basic]

Incorrect Answers

B: We cannot use the Text CommandType if we want to execute a stored procedure. The StoredProcedure CommandType should be used instead.

D: The StoredProcedure, not the TableDirect, CommandType should be used if we want to use a stored procedure in the command string.

E: The CommandType property of OleDbCommand gets or sets a value indicating how the CommandText property is interpreted. It cannot be used to set the SQL Statement of the command.

Question: 17. (A)

You develop a Windows-based application XYZiApp by using Visual Studio .NET. XYZiApp uses a SqlConnection object for database access.

You typically run XYZiApp on a computer that has limited RAM and hard disk space. After the code finishes using the SqlConnection object, you must ensure that the connection is closed and that any resources consumed by the object are released immediately.

What should you do?

- A. Call the Finalize method of the SqlConnection object.
- B. Call the Dispose method of the SqlConnection object.
- C. Set the SqlConnection object equal to Nothing.
- D. Set the SqlConnection object equal to "".

Answer: B

Explanation:

SqlConnection.Dispose Method releases the unmanaged resources used by the SqlConnection and optionally releases the managed resources. Calling this method with Dispose release both managed and unmanaged resources..

Reference:

.NET Framework Class Library, SqlConnection.Dispose Method (Boolean) [Visual Basic]

Incorrect Answers

A: The Finalize method invokes Dispose method but only the only unmanaged resources are released. **C, D:** This is not the way to release the resources used by the SqlConnection object.

Question: 18. (A)

You develop a Windows-based order entry application XYZEntry by using Visual Studio .NET. XYZEntry includes a DataSet object. When a customer order exceeds the number of items currently available in stock, XYZEntry must create two separate entries in a database.

The first entry specifies the total number of items in the customer order, as well as the number of items that can be supplied immediately from available stock. The second entry records backorder information, and specifies the number of items that must be supplied when new stock becomes available.

Backorder processing is handled by a separate component. You must ensure that all order information in the DataSet object is captured and passed to this component. To do so, you need to create a new DataSet object.

Which method should you use?

- A. DataSet.Clone
- B. DataSet.Copy

- C. DataSet.Merge
- D. DataSet.GetChanges

Answer: D

Explanation:

The DataSet.GetChanges Method gets a copy of the DataSet containing all changes made to it since it was last loaded. It meets the requirement of this scenario.

Reference:

.NET Framework Class Library, DataSet.Copy Method [Visual Basic] .NET Framework Class Library, DataSet.Clone Method [Visual Basic] .NET Framework Class Library, DataSet.GetChanges Method [Visual Basic]

Incorrect Answers

A: The DataSet.Clone method copies the structure of the DataSet, including all DataTable schemas, relations, and constraints. However it does not copy any data.

B: DataSet.Copy method copies both the structure and data for this DataSet. But we are only interested in the changes.

C: We want to create a new DataSet object, not merge two existing objects.

Question: 19. (A)

You use Visual Studio .NET to create a data entry form. The form enables users to edit personal information such as address and telephone number, The form contains a text box named textPhoneNumber.

If a user enters an invalid telephone number, the form must notify the user of the error. You create a function named ValidPhone that validates the telephone number entered. You include an ErrorProvider control named ErrorProvider1 in your form.

Which additional code segment should you use?

- A. Private Sub textPhone_Validating _ (ByVal sender As Object, _ ByVal e As System.ComponentModel.CancelEventArgs) _ Handles textPhoneNumber.Validating If ValidPhone() = False then _ ErrorProvider1.SetError(textPhone, "Invalid Phone. ") End If End Sub
- B. Private Sub textPhone_Validated _ (ByVal sender As Object, _ ByVal e As System.EventArgs) _ Handles textPhoneNumber.Validated If ValidPhone() = False then _ ErrorProvider1.SetError(textPhone, "Invalid Phone.") End If End Sub
- C. Private Sub textPhone_Validating _ (ByVal sender As Object, _ ByVal e As System.ComponentModel.CancelEventArgs) _ Handles textPhoneNumber.Validating If ValidPhone() = False then _ ErrorProvider1.GetError(textPhone) End IF End Sub
- D. Private Sub textPhone_Validated _ (ByVal sender As Object, _ ByVal e As System.EventArgs) _ Handles textPhoneNumber.Validated If ValidPhone() = False then _ ErrorProvider1.GetError(textPhone). End If End Sub
- E. Private Sub textPhone_Validating _ (ByVal sender As Object, _ ByVal e As System.ComponentModel.CancelEventArgs) _ Handles textPhoneNumber.Validating If ValidPhone() = False then _ ErrorProvider1.UpdateBinding() End If End Sub
- F. Private Sub textPhone_Validated _ (ByVal sender As Object, _ ByVal e As System.EventArgs) _ Handles textPhoneNumber.Validated If ValidPhone() = False then _ ErrorProvider1.UpdateBinding() End If End Sub

Answer: A

Explanation:

We should add code for the Validating Event. If the ValidPhone() function evaluates to false we should use the ErrorProvider.SetError method to set the error description string.

Focus events occur in the following order:

- 1 Enter
- 2 GotFocus
- 3 Leave
- 4 Validating
- 5 Validated
- 6 LostFocus

Reference:

.NET Framework Class Library, Control.Validating Event [Visual Basic] .NET Framework Class Library, ErrorProvider Members.NET Framework Class Library, Control.Validated Event [Visual Basic]

Incorrect Answers: Option B, D, G:

We should add code for the Validating Event, not the Validated event. The Control.Validated Event occurs when the control is finished validating.

Option C:

The ErrorProvider.Geterror method returns the current error description string for the specified control. We want to set it however..

Option F:

The ErrorProvider.Updatebinding method is of no use here. It provides a method to update the bindings of the DataSource, DataMember, and the error text. We only want to set the error description string.

Question: 20. (A)

You use Visual Studio .NET to develop a Windows-based application for your human resources (HR) department. The HR department has two subdivisions named Benefits and Employee Information. The Benefits subdivision includes the Vacation group. Both subdivisions will use your application. You plan to create four forms modeled after the organizational structure of the HR department. The forms will be named HR, EmployeeInformation, Benefits, and Vacation. The forms must be arranged in a hierarchy so that each form includes all code and controls found on the forms above it in the hierarchy. The form at the top of the hierarchy will be a standard Windows Form. The form must also adhere to the following rules:

All forms should include code to access the general HR database.

Only forms used by the Benefits subdivision should have access to the Benefits database table.

The forms used by the Employee Information subdivision should have access to the EmployeeInformation database table.

The forms used by the Vacation group should include custom code to calculate vacation time.

Now you must create the form hierarchy. Which code segment should you use?

A. Public Class HR

Inherits System.Windows.Forms.Form End Class

Public Class Benefits Inherits System.Windows.Forms.Form Implements HR

End Class Public Class Vacation

Inherits System.Windows.Forms.Form

Implements Benefits

```

End Class
Public Class EmployeeInformation
    Inherits System.Windows.Forms.Form
    Implements HR
End Class
B. Public Class HR
    Inherits System.Windows.Forms.Form
End Class
Public Class Benefits
    Inherits System.Windows.Forms.Form
    Implements HR
End Class
Public Class Vacation
    Inherits System.Windows.Forms.Form
    Implements Benefits
End Class
Public Class EmployeeInformation
    Inherits System.Windows.Forms.Form Implements Benefits End Class
C. Public Class HR
    Inherits System.Windows.Forms.Form
End Class
Public Class Benefits
    Inherits HR
End Class
Public Class Vacation
    Inherits Benefits
End Class
Public Class EmployeeInformation
    Inherits HR End Class
D. Public Class Hr
    Inherits System.Windows.Forms.Form
End Class
Public Class Benefits
    Inherits HR
End Class
Public Class Vacation
    Inherits Benefits
End Class
Public Class EmployeeInformation
    Inherits Benefits End Class

```

Answer: C

Explanation:

To meet the required restrictions on the Benefits database table, the EmployeeInformation table, and the custom code, we must use the **Inherits** statement: 1) HR inherits from the root form 2) Benefits inherits from HR. 3) Vacation inherits from Benefits. 4) EmployeeInformation inherits from HR.

The requirements are met:

All forms should include code to access the general HR database. Is met by the fact that all forms inherits from HR.
 Only forms used by the Benefits subdivision should have access to the Benefits database table. Is met by the fact that nothing inherits from Benefits.
 The forms used by the Employee Information subdivision should have access to the EmployeeInformation database table.

This is possible since EmployeeInformation is a separate Class.

The forms used by the Vacation group should include custom code to calculate vacation time. This is possible since EmployeeInformation is a separate Class.

Reference:

Visual Basic Language Specification, Inheritance Visual Basic Language Reference, Implements Statement

Incorrect Answers

A: The implements keyword can only be used for interfaces. We cannot use like provided in this proposed solution.

B: The implements keyword can only be used for interfaces

D: EmployeeInformation should inherit from HR, not from Benefits.

Question: 21. (A)

You use Visual Studio .NET to create an accounting application called XYZAccounting, which includes a function named CreditCardValidate. This function contains several dozen variables and objects.

To debug CreditCardValidate, you create a breakpoint at the top of the function. You run the accounting application within the Visual Studio .NET IDE and step through the code for CreditCardValidate. You need to examine the contents of the variables and objects in scope on each line of code. However, you want to avoid seeing the contents of all variables and objects within CreditCardValidate. You also need to complete the debugging process as quickly as possible.

What should you do?

A. Use the Autos window.

B. Use the Locals window.

C. Use the QuickWatch window.

D. From the Command window, print the contents of each variable that you want to examine by using the following code segment:
<variablename>

Answer: A

Explanation:

The Autos window displays variables used in the current statement and the previous statement only. This meets the requirement need to examine the contents of the variables and objects in scope on each line of code, while avoiding seeing the contents of all variables and objects within CreditCardValidate.

Reference:

Visual Studio, Using the Locals Window Visual Studio, Using Autos Window Visual Studio, Using the QuickWatch Dialog Box

Incorrect Answers

B: The Locals window displays variables local to the current context. But we only need to examine the contents of the variables and objects in scope on each line of code.

C: The QuickWatch Dialog Box, there is no QuickWatch window, is used to quickly evaluate a variable or expression, or edit the value of a variable or register. It is not used to display values of several variables.

D: This would require much manual labor.

Question: 22. (A)

You use Visual Studio .NET to create a custom control named XYZStats. XYZStats will operate by periodically polling your network and updating the network statistics displayed to each user.

XYZStats contains a Timer control named Timer1. You set the control's Interval property to 500 milliseconds. You write code in the Tick event handler for Timer1 to poll the network status. You also create a procedure named RedrawControl to update the statistics displayed in XYZStats.

When the form that contains XYZStats is minimized or hidden behind another window, the control should not consume unnecessary resources by updating the display. You must ensure that this condition is met. In addition, you want to write the minimum amount of code needed to finish developing Stats.

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

- A. Place the following code segment in the Tick event handler for Timer1: RedrawControl()
- B. Place the following code segment in the Tick event handler for Timer1: Me.Invalidate()
- C. Place the following code segment in the Paint event handler for Timer1: If Me.Visible = True Then Me.Invalidate()
- D. Place the following code segment in the Tick event handler for Timer1: If Me.Visible = True Then Me.Invalidate()
- E. Place the following code segment in the Paint event handler for Stats: RedrawControl(1)
- F. Place the following code segment in the Paint event handler for Stats: Me.Invalidate

Answer: D & E

Explanation:

D: We use the Tick event to test if the form is visible (Me.Visible = True) and then invalidate the form. **Note:** The Invalidate method invalidates a specific region of the control and causes a paint message to be sent to the control. It will cause the Paint event of the Stats control to fire.

E: The invalidate method of the form will cause a paint event of the Stats control. We handle this by adding the RedrawControl() method to the Paint Event of the Stats control.

Reference:

.NET Framework Developer's Guide, Rendering a Windows Forms Control [Visual Basic] .NET Framework Class Library, Control.Invalidate Method () [Visual Basic]

Incorrect Answers

A: We should only use RedrawControl if the form is visible. Furthermore we should put RedrawControl() in the Paint event handler for stats, not in Tick event for Timer1.

B: We should only use RedrawControl if the form is visible.

C: We should use the Invalidate method in Tick event for Timer1, not in the Paint event handler for Stats. **Note:** The Paint Event is raised by a control every time it needs to update its display.

F: We should put RedrawControl() in the Paint event handler for stats, not in Tick event for Timer1.

Question: 23. (A)

You plan to use Visual Studio .NET to create a class named BusinessRules, which will be used by all applications in your company. BusinessRules defines business rules and performs calculations based on those rules. Other developers in your company must not be able to override the functions and subroutines defined in BusinessRules with their own definitions.

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

- A. Create a Windows control library project
- B. Create a class library project.

- C. Create a Windows Service project.
- D. Use the following code segment to define BusinessRules: Protected Class BusinessRules
- E. Use the following code segment to define BusinessRules: Public Shadows Class BusinessRules
- F. Use the following code segment to define BusinessRules: Public NotInheritable Class BusinessRules
- G. Use the following code segment to define BusinessRules: Public MustInherit Class BusinessRules

Answer: B & F

Explanation:

B: A class library project would be adequate for an implementation of Business Rules.

F: A NotInheritable class is a class that may not be derived from. NotInheritable classes are primarily used to prevent unintended derivation.

Reference:

Visual Basic Language Reference, Class Statement Visual Basic Language Specification, MustInherit and NotInheritable Classes Visual Basic Language Concepts, Introduction to Objects in Visual Basic Visual Basic Language Concepts, Overriding Properties and Methods

Incorrect Answers

A: The BusinessRules Class defines business rules and perform calculations. It does not define a user Interface. A Windows control library project is not appropriate.

C: Business rules are not implemented as a Windows service.

D: Entities declared with the Protected keyword have protected access. They are accessible only from within their own class or from a derived class. However, this would not prevent the class from being overridden.

E: Shadowing does not apply here. Shadowed members are used to locally replace a member that has broader scope.

G: The MustInherit class forces the regular class to include actual implementations of all inherited MustInherit members which is what we want to prevent.

Question: 24. (A)

You develop a Windows control named FormattedTextBox, which will be used by many developers in your company. FormattedTextBox will be updated frequently.

You create a custom bitmap image named CustomControl.bmp to represent FormattedTextBox in the Visual Studio .NET toolbox. The bitmap contains the current version number of the control, and it will be updated each time the control is updated. The bitmap will be stored in the application folder.

If the bitmap is not available, the standard TextBox control bitmap must be displayed instead. Which class attribute should you add to FormattedTextBox?

- A. <ToolboxBitmap(GetType(TextBox))> _ Class FormattedTextBox
- B. <ToolboxBitmap("CustomControl.bmp")> _ Class FormattedTextBox
- C. <ToolboxBitmap(GetType(TextBox), _
"CustomControl.bmp")> _ Class FormattedTextBox
- D. <ToolboxBitmap(GetType(TextBox))> _
<ToolboxBitmap("CustomControl.bmp")> _ Class FormattedTextBox

Answer: C

Explanation:

We specify the standard Textbox control bitmap with (GetType(TextBox)). Then we supply the file name of the custom bitmap image.

Reference:

Visual Basic and Visual C# Concepts, Providing a Toolbox Bitmap for Your Control .NET Framework Class Library, ToolboxBitmapAttribute Class [Visual Basic]

Incorrect Answers

A: We must use the CustomControl.bmp bitmap image.

B: We must specify the default image with GetType(TextBox)

D: Incorrect syntax.

Question: 25. (A)

You use Visual Studio .NET to create a Windows-based application. The application includes a form named XYZ. You implement print functionality in XYZ by using the native .NET System Class Libraries.

XYZ will print a packing list on tractor-fed preprinted forms. The packing list always consists of two pages. The bottom margin of page 2 is different from the bottom margin of page 1.

You must ensure that each page is printed within the appropriate margins.
What should you do?

- A. When printing page 2, set the bottom margin by using the PrintPageEventArgs object.
- B. When printing page 2, set the bottom margin by using the QueryPageSettingEventArgs object.
- C. Before printing, set the bottom margin of page 2 by using the PrintSetupDialog object.
- D. Before printing, set the bottom margin of page 2 by using the PrinterSettings object

Answer: A

Question: 26. (A)

You develop a Windows-based application for your payroll department. The application will include a procedure named Signin, which must allow users to report that they are present in their offices. The procedure must also allow each user to sign in other users. The procedure must return a Boolean variable indicating success or failure.

In most cases, the procedure will be called with no parameters. When no parameters are passed in, the procedure should recognize the user by the information stored in global variables. When one user signs in another user, the procedure should accept a string variable parameter that represents the user name of the user who is signed in.

You want to define your procedure to present the most efficient contract to the consumer. Which two code segments should you use? (Each correct answer presents part of the solution. Choose two)

- A. Public Function SignIn() As Boolean.
- B. Public Function SignIn(userName As String) As Boolean
- C. Public Function SignIn(userName As String, _ Success As Boolean) As Boolean
- D. Public Function SignInWithName(userName As String) _ As Boolean
- E. Public SignIn(username As String)
- F. Public Sub SignInWithName(userName As String)

Answer: A & B

Explanation:

We must overload the definition of Signin. We should implement Signin as functions, not as sub procedures, since we want Signin to return a value.

A: One Signin function with no parameters.

B: One Signin function with a string parameter.

Reference:

Visual Basic Language Specification, Overloading and Signatures

Incorrect Answers

C: The function should only have one parameter, not two.

D: When overloading we must identical named identities. **E, F:** Functions is better in this scenario. Furthermore to overload a Sub procedure we need atleast two Sub procedures with the same name.

Question: 27. (A)

You use Visual Studio .NET to create a Windows-based application called XYZMortgage. The main form of the application contains several check boxes that correspond to application settings. One of the CheckBox controls is named advancedCheckBox. The caption for advancedCheckBox is Advanced.

You must enable users to select or clear this check box by pressing ALT+A. Which two actions should you take? (Each correct answer presents part of the solution. Choose two)

- A. Set advancedCheckBox.AutoCheck to True.
- B. Set advancedCheckBox.AutoCheck to False.
- C. Set advancedCheckBox.Text to "&Advanced".
- D. Set advancedCheckBox.Tag to "&Advanced".
- E. Set advancedCheckBox.CheckState to Unchecked.
- F. Set advancedCheckBox.CheckState to Indeterminate.
- G. Set advancedCheckBox.Apperance to Button.
- H. Set advancedCheckBox.Apperance to Normal.

Answer: A & C

Explanation:

A: The AutoCheck property must be set to True so that the CheckBox automatically is changed when the check box is accessed.

C: The Text property contains the text associated with this control. By using the &-sign we define a shortcut command for this control. "@Advanced" defines the shortcut ALT+A.

Reference:

.NET Framework Class Library, CheckBox Properties.NET Framework Class Library, CheckBox.AutoCheck Property [Visual Basic]

Incorrect Answers

B: If AutoCheck is set to false, you will need to add code to update the Checked or CheckStatevalues in the Click event handler.

D: The Tag property only contains data about the control. **E, F:** The CheckState property only contains the state of the check box. **G,**

H: The appearance property only determines the appearance of a check box control.

Question: 28. (A)

You develop a Windows-based application that contains a form named ContactXYZ. You need to write code to initialize all class-level

variables in ContactXYZ as soon as ContactXYZ is instantiated. You will place your code in a public procedure in the ContactXYZ class.

Which public procedure should you use?

- A. Create
- B. Initialize
- C. Load
- D. New

Answer: D

Explanation:

New is public by default.

Reference:

.NET Framework Class Library, Form.Load Event [Visual Basic] Visual Basic Concepts, Form Event Changes in Visual Basic .NET

Incorrect Answers

A: Create does not apply here.

B: In Visual Basic 6.0, the Initialize event was used to execute code before a form was loaded. There is not such event in Visual Basic .NET.

D: Load is Private by default. Furthermore, the code for New is executed before the code in the Load procedure. **Note:** The Form.Load Event occurs before a form is displayed for the first time. You can use this event to perform tasks such as allocating resources used by the form.

Question: 29. (A)

You use Visual Studio .NET to develop a data entry form for a Windows-based application. The form will display one record at a time from a database. The form must include four Button controls. Each control will be used to navigate through the data in the database.

You decide to create one procedure to handle the Click event for all four controls. What should you do?

- A. Create a control array consisting of four Button controls. Your code will inspect the Index argument that is passed into the Click event.
- B. Create a control array consisting of four Button controls. Your code will inspect the Index property of the sender parameter of the Click event.
- C. Create four individual Button controls. Create a procedure named NavButtons_Click to handle the Click event for all four controls by using the AddHandler keyword.
- D. Create four individual Button controls. Create a procedure named NavButtons_Click to handle the Click event for all four controls by using the Implements keyword.

Answer: C

Explanation:

The AddHandler statement is similar to the Handles clause in that both allow you to specify an event handler that will handle an event. We can use the AddHandler statement to add the four events to the event handler, the NavButtons_click procedure.

Reference:

Visual Basic Language Concepts, AddHandler and RemoveHandler Visual Basic Concepts, Control Array Changes in Visual Basic .NET Visual Basic Language Concepts, Implements Keyword

Incorrect Answers A, B: Control arrays could be used in Visual Basic 6.0, but they are no longer supported in Visual Basic .NET.

D: The Implements keyword is used to signify that a class member implements a specific interface. We should not implement an interface in this scenario however. We want to configure events for an event handler.

Question: 30. (A)

You use Visual Studio .NET to create a Windows-based application. On the main application form, XYZFormMain, you create a TextBox control named textConnectionString. Users can enter a database connection string in this box to access customized data from any database in your company.

You also create a Help file to assist users in creating connection strings. The Help file will reside on your company intranet. Your application must load the Help file in a new browser window when the user presses F1 key, but only if textConnectionString has focus. You must create this functionality by using the minimum amount of code.

In which event should you write the code to display the Help file?

- A. textConnectionString_KeyPress
- B. textConnectionString_KeyDown
- C. textConnectionString_KeyUp
- D. textConnectionString_GiveFeedback.
- E. textConnectionString HelpRequested

Answer: E

Explanation:

The Control.HelpRequested Event occurs when the user requests help for a control. The HelpRequested event is commonly raised when the user presses the F1 key or an associated context-sensitive help button is clicked. This would be the most straightforward solution and would require minimal code.

Note: Key events occur in the following order:

- 1 KeyDown
- 2 KeyPress
- 3 KeyUp

Reference:

.NET Framework Class Library, Control.HelpRequested Event [Visual Basic] .NET Framework Class Library, Control.KeyDown Event [Visual Basic]

Incorrect Answers

A: The KeyPress event occurs when a key is pressed while the control has focus. The KeyPress event could be used to provide a solution, but it would require more code.

B: The KeyDown event occurs when a key is pressed while the control has focus.

C: The KeyUp occurs when a key is released while the control has focus.

D: The Control.GiveFeedback does not apply here. It occurs during a drag operation.

Question: 31. (A)

Your company uses Visual Studio .NET to create a Windows-based application for XYZ. The application is named CustomerTracker, and it calls an assembly named Schedule.

Six months pass. The hospital asks your company to develop a new Windows-based application.

The new application will be named EmployeeTracker, and it will also call Schedule. Because you anticipate future revisions to this assembly, you want only one copy of Schedule to serve both applications.

Before you can use Schedule in EmployeeTracker, you need to complete some preliminary tasks.

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

- A. Create a strong name for Schedule.
- B. Use side-by-side execution to run Schedule.
- C. Install Schedule in the global assembly cache.
- D. Move Schedule to the Windows\System32 folder.
- E. Create a reference in EmployeeTracker to Schedule.
- F. Create a reference in EmployeeTracker to CustomerTracker.

Answer: A, C & E

Explanation:

A: An assembly must have a strong name to be installed in the global assembly cache.

C: You intend to share an assembly among several applications, you can install it into the global assembly cache.

E: We must create a reference from the application (EmployeeTracker) to the assembly (Schedule).

Reference:

.NET Framework Developer's Guide, Working with Assemblies and the Global Assembly Cache .NET Framework Developer's Guide, Side-by-Side Execution

Incorrect Answers

B: Side-by-side execution is the ability to run multiple versions of the same assembly simultaneously. It is not required in this scenario.

D: The assembly should be moved to the global assembly cache, not to the Windows\System32 folder.

F: The application should reference the assembly, not the first application.

Question: 32. (A)

You use Visual Studio .NET to create a Windows-based application. The application includes a form named ConfigurationForm.

ConfigurationForm contains 15 controls that enable users to set basic configuration options for the application. You design these controls to dynamically adjust when users resize ConfigurationForm. The controls automatically update their size and position on the form as the form is resized. The initial size of the form should be 650 x 700 pixels.

If ConfigurationForm is resized to be smaller than 500 x 600 pixels, the controls will not be displayed correctly. You must ensure that users cannot resize ConfigurationForm to be smaller than 500 x 600 pixels.

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

- A. Set the MinimumSize property to "500,600".
- B. Set the MinimumSize property to "650,700".
- C. Set the MinimizeBox property to True.
- D. Set the MaximumSize property to "500,600".
- E. Set the MaximumSize property to "650,700".

- F. Set the MaximizeBox property to True.
- G. Set the Size property to "500,600".
- H. Set the Size property to "650,700".

Answer: A & H

Explanation:

A: The Form.MinimumSize Property gets or sets the minimum size the form can be resized to. It should be set to "500, 600".

H: We use the size property to set the initial size of the form. The initial size should be set to "650, 700".

Reference:

NET Framework Class Library, Form.MinimumSize Property [Visual Basic] NET Framework Class Library, Form.Size Property [Visual Basic]

Incorrect Answers

B: The initial size is 650 x 750. The minimal size should be set to "500,600".

C: The minimize button will be displayed, but it will not affect the size of the form. **D, E:** There is no requirement to define a maximum size of the form.

F: The maximize button will be displayed, but it will not affect the size of the form.

G: The initial size should be 650 x 700, not 500 x 600.

Question: 33. (A)

You are preparing a localized version of a Windows Form named XYZLocal. Users of XYZLocal speak a language that prints text from right to left. User interface elements on the form need to conform to this alignment.

You must ensure that all user interface elements are properly formatted when the localized

Windows Form runs. You must also ensure that XYZLocal is easy to update and maintain.

What should you do?

- A. Set the RightToLeft property of each control on the form to **Yes**.
- B. Set the RightToLeft property of the form to **Yes**.
- C. Set the Language property of the form to the appropriate language.
- D. Set the Localizable property of the form to **True**.

Answer: B

Explanation:

The RightToLeft property is used for international applications where the language is written from right to left

Reference:

Visual Basic and Visual C# Concepts, Displaying Right-to-Left Text in Windows Forms for Globalization

Incorrect Answers

A: The RightToLeft property can be set either to controls or to the form. The best solution is to set the property only for the form.

C: The Language property is not used to format text.

D: The Localizable property is not used to format text.

Question: 34. (A)

You use Visual Studio .NET to create a component named Request. This component includes a method named AcceptRequest, which tries to process new user requests for services. AcceptRequest calls a private function named Validate.

You must ensure that any exceptions encountered by Validate are bubbled up to the parent form of Request. The parent form will then be responsible for handling the exceptions. You want to accomplish this goal by writing the minimum amount of code.

What should you do?

A. Use the following code segment in AcceptRequest: Me.Validate()

B. Use the following code segment in AcceptRequest: Try

Me.Validate() Catch ex As Exception

Throw

End

ex

Try

C. Use the following code segment in AcceptRequest: Try

Me.Validate() Catch ex As Exception

Throw new Exception ("Exception in AcceptRequest",

End

ex)

Try

D. Create a customer Exception class named RequestException by the following code segment:

Public Class RequestException

Inherits System.ApplicationException

Public Sub New()

End Sub

Public Sub New (message As String)

MyBase.New(message)

End Sub

Public Sub New (message As String, inner As Exception)

MyBase.New(message, inner) End Sub End class

In addition, use the following code segment in AcceptRequest:

Try Me.Validate() Catch ex As Exception Throw new

RequestException("Exception in _ AcceptRequest", ex)

End Try

Answer: A

Explanation:

The unhandled exception automatically will be thrown to the client application. This solution meets the requirement that the least amount of code should be used.

Question: 35. (A)

You use Visual Studio .NET to create a Windows-based application. The application includes a form named GraphForm, which displays statistical data in graph format. You use a custom graphing control that does not support resizing.

You must ensure that users cannot resize, minimize, or maximize GraphForm. Which three actions should you take? (Each answer presents part of the solution. Choose three)

A. Set GraphForm.MinimizeBox to False.

B. Set GraphForm.MaximizeBox to False.

C. Set GraphForm.ControlBox to False.

D. Set GraphForm.ImeMode to Disables.

E. Set GraphForm.WindowState to Maximized.

- F. Set GraphForm.FormBorderStyle to one of the Fixed styles.
- G. Set GraphForm.GridSize to the appropriate size.

Answer: A, B & F

Explanation:

We disable the Minimize and Maximize buttons with the GraphForm.MinimizeBox and the GraphForm.MaximizeBox properties. Furthermore we should use a fixed FormBorderStyle to prevent the users from manually resizing the form.

Reference:

Visual Basic and Visual C# Concepts, Changing the Borders of Windows Forms .NET Framework Class Library, Form.MinimizeBox Property [Visual Basic] .NET Framework Class Library, Form.MaximizeBox Property [Visual Basic]

Question: 36. (A)

You are a developer for a XYZ inc that provides free software over the Internet. You are developing an e-mail application that users all over the world can download.

The application displays text strings in the user interface. At run time, these text strings must appear in the language that is appropriate to the locale setting of the computer running the application.

You have resources to develop version of the application for only four different cultures. You must ensure that your application will also be usable by people of other cultures. How should you prepare the application for deployment?

- A. Package a different assembly for each culture.
- B. Package a different executable file for each culture.
- C. Package a main assembly for source code and the default culture. Package satellite assemblies for the other cultures.
- D. Package a main assembly for source code. Package satellite assemblies for each culture.

Answer: C

Explanation:

When you build a project, the resource files are compiled and then embedded in satellite assemblies, or assemblies which contain only the localized resources. The fallback resources are built into the main assembly, which also contains the application code.

Reference:

Visual Basic and Visual C# Concepts, What's New in International Applications Visual Basic and Visual C# Concepts, Introduction to International Applications in Visual Basic and Visual C#

Incorrect Answers

- A:** A main assembly is needed.
- B:** Assemblies not executables are used.
- D:** The main assembly contains the fallback resources (including default culture).

Question: 37. (A)

Your development team uses Visual Studio .NET to create an accounting application, which contains a class named XYZAccounts. This class instantiates several classes from a COM component that was created by using Visual Basic 6.0 Each COM component class includes a custom method named ShutDownObject that must be called before terminating references to the class.

Software testers report that the COM component appears to remain in memory after the application terminates. You must ensure that the ShutdownObject method of each COM component class is called before XYZAccounts is terminated. What should you do?

- A. Add code to the Terminate event of XYZAccounts to call the ShutdownObject method of each COM component class.
- B. Find each location in your code where a reference to XYZAccounts is set to Nothing or goes out of scope. Add code after each instance to manually invoke the Visual Studio .NET garbage collector.
- C. Add the procedure Protected Overrides Finalize() to XYZAccounts. Add code to the procedure to call the ShutdownObject method of each COM component class.
- D. Add the procedure Private Sub Finally() to XYZAccounts. Add code to the procedure to call the ShutdownObject method of each COM component class.

Answer: C

Explanation:

The Sub Finalize procedure in Visual Basic .NET is a destructor and it destroys objects. It could be useful when destroying Visual Basic 6.0 COM objects.

Reference:

Visual Basic Language Concepts, Object Lifetime: How Objects Are Created and Destroyed

Question: 38. (A)

You use Visual Studio .NET to develop a Windows-based application called XYZApp. Your application will display customer order information from a Microsoft SQL Server database. The orders will be displayed on a Windows Form in a data grid named DataGrid1. DataGrid1 is bound to a DataView object.

The Windows Form includes a button control named displayBackOrder. When users click this button, DataGrid1 must display only customer orders whose BackOrder value is set to True.

How should you implement this functionality?

- A. Set the RowFilter property of the DataView object to "BackOrder = True".
- B. Set the RowStateFilter property of the DataView object to "BackOrder = True".
- C. Set the Sort property of the DataView object to "BackOrder = True".
- D. Set the ApplyDefaultSort property of the DataView object to True.

Answer: A

Explanation:

Using the RowFilter property of a data view, you can filter records in a data table to make available only records you want to work with

Reference:

Visual Basic and Visual C# Concepts, Introduction to Filtering and Sorting in Datasets Visual Basic and Visual C# Concepts, Filtering and Sorting Data Using Data Views

Incorrect Answers

B: To filter based on a version or state of a record, set the RowStateFilter property. It does not apply here. **C, D:** We want to filter, not sort the data view.

Question: 39. (A)

You develop a Windows-based application called XYZApplication by using Visual Studio .NET. XYZApplication receives XML data files from various external suppliers. An XML Schema file defines the format and the data types for the XML data files.

XYZApplication must parse the incoming XML data files to ensure that they conform to the schema.

What should you do?

- A. Implement a DataSet object and code an event handler to process its events.
- B. Implement a DataSet object and set its Enforce Constraints property to **True**.
- C. Implement an XmlValidatingReader object and code an event handler to process its events.
- D. Implement an XmlValidatingReader object and examine its ReadState property after reading the XML data file.

Answer: C

Explanation:

The XmlValidatingReader class, an implementation of the XmlReader class, provides support for XML validation. The ValidationEventHandler event is used to set an event handler for receiving information about schema validation errors.

Reference:

.NET Framework Developer's Guide, Validation of XML with XmlValidatingReader .NET Framework Developer's Guide, XmlValidatingReader Validation Event Handler Callback [Visual Basic]

Question: 40. (A)

You use Visual Studio .NET to create an application. Your application contains two classes, Region and City, which are defined in the following code segment. (Line numbers are included for reference only.)

```
01 Public Class Region 02 Public Overridable Sub CalculateTax() 03     'Code to calculate tax goes here. 04 End Sub 05 End Class
06 Public Class City 07 Inherits Region 08 Public Overrides Sub CalculateTax() 09     'Insert new code. 10 End Sub 11 End Class
```

You need to add code to the CalculateTax method of the City class to call the CalculateTax method of the Region class. Which code segment should you add on line 9?

- A. CalculateTax()
- B. Me.CalculateTax()
- C. MyBase.CalculateTax()
- D. MyClass.CalculateTax()

Answer: C

Explanation:

The MyBase keyword to call methods in a base class when overriding methods in a derived class.

Reference:

Visual Basic Language Concepts, Inheritance Basics Visual Basic Language Specification, 4.5.1 Overriding Methods

Question: 41. (A)

You develop an application that enables users to enter and edit purchase order details. The application includes a Windows Form named DisplayXYZForm. The application uses a client-side DataSet object to manage data.

The DataSet object contains a Data Table object named XYZDetails. This object includes one column named Quantity and another

named UnitPrice. For each item on a purchase order, your application must display a line item total in a DataGrid control on DisplayXYZForm. The line item is the product of Quantity times UnitPrice. Your database design does not allow you to store calculated values in the database.

You need to add code to your Form_Load procedure to calculate and display the line item total. Which code segment should you use?

- A. Dim totalColumn As New DataColumn("Total", _ Type.GetType("System.Decimal")) XYZDetails.Columns.Add(totalColumn)
totalColumn.Expression = "Quantity * UnitPrice"
- B. Dim totalColumn As New DataColumn("Total", _ Type.GetType("System.Decimal")) XYZDetails.Columns.Add(totalColumn)
totalColumn.Equals("Quantity * UnitPrice")
- C. XYZDetails.DisplayExpression("Quantity * UnitPrice")
- D. XYZDetails.DisplayExpression("quantityColumn + _ unitPriceColumn")

Answer: A

Explanation:

We use the Expression property of the DataColumn object calculate the values in the column.

Reference:

.NET Framework Developer's Guide, Creating Expression Columns [Visual Basic] .NET Framework Class Library, DataColumn Class [Visual Basic].NET Framework Class Library, Object.Equals Method (Object) [Visual Basic] .NET Framework Class Library, DataTable.DisplayExpression Property [Visual Basic]

Incorrect Answers

B: The Equals method cannot be used in this way. The equals method is used to test if different objects are equal. **C, D:** The DisplayedExpression would be set to a string value, not a calculated value.

Question: 42. (A)

Your company XYZ, uses Visual Studio .NET to develop internal applications. You create a Windows control that will display custom status bar information.

Many different developers at XYZ will use the control to display the same information in many different applications. The control must always be displayed at the bottom of the parent form in every application. It must always be as wide as the form. When the form is resized, the control should be resized and repositioned accordingly.

What should you do?

- A. Create a property to allow the developers to set the Dock property of the control. Set the default value of the property to AnchorStyle.Bottom.
- B. Create a property to allow the developer to set the Anchor property of the control. Set the default value of the property to AnchorStyle.Bottom.
- C. Place the following code segment in the UserControl_Load event: Me.Dock = DockStyle.Bottom
- D. Place the following code segment in the UserControl_Load event: Me.Anchor = AnchorStyle.Bottom

Answer: C

Explanation:

DockStyle.Bottom docks the control to the bottom of the form. This will force the control to be as wide as to form. Furthermore the control will be resized automatically.

Reference:

Visual Basic and Visual C# Concepts, Aligning Your Control to the Edges of Forms NET Framework Class Library, AnchorStyles Enumeration [Visual Basic]

Incorrect Answers

A: There is no need to the other developers to set the Dock property.

B: The Dock property should be used.

D: The Anchorstyle class specifies how a control anchors to the edges of its container. Not how a control is docked.

Question: 43. (A)

You use Visual Studio .NET to develop applications for your human resources department. You create the following interfaces:

```
Public Interface IEmployee
    Property Salary() As Double
End Interface
Public Interface IExecutive
    Inherits IEmployee
    Property AnnualBonus() As Double
End Interface
```

The IEmployee interface represents a generic Employee concept. All actual employees in your company should be represented by interfaces that are derived from IEmployee. Now you need to create a class named Manager to represent executives in your company. You want to create this class by using the minimum amount of code. You write the following code:

```
Public Class Manager
End class
```

Which additional code segment or segments should you include in Manager? (Choose all that apply)

- A. Implements IExecutive
- B. Implements IEmployee, IExecutive
- C. Inherits IExecutive
- D. Inherits IEmployee, IExecutive
- E. Property Salary() As Double Implements IExecutive.Salary
- F. Property AnnualBonus() As Double Implements _ IExecutive.AnnualBonus

Answer: A, E & F

Explanation:

A: A class can implement an Interface. The Manager class should implement the IExecutive interface. **E, F:** The properties that are defined in the Interface must be implemented in a Class.

Incorrect Answers

B: The class should not implement both Interfaces, just the IExecutive interface. **C, D:** A class cannot inherit from an Interface.

Explanation:

The Manager Class only needs to inherit from the IExecutive class. The Manager class inherits the AnnualBonus property from the IExecutive class and the Salary property from the IEmployee class (since IExecutive inherits from IEmployee). There is no need to define any properties for the new class.

Reference:

Visual Basic Language Concepts, Inheritance Basics

Question: 44. (A)

Your development team is creating a new Windows-based application for the XYZ company. The application consists of a user interface and several XML Web services. You develop all XML Web services and perform unit testing. Now you are ready to write the user interface code.

Because some of your servers are being upgraded, the XML Web service that provides mortgage rates is currently offline. However, you have access to its description file.

You must begin writing code against this XML Web service immediately. What should you do?

- A. Generate the proxy class for the XML Web service by using Disco.exe.
- B. Generate the proxy class for XML Web service by using Wsdl.exe.
- C. Obtain a copy of the XML Web service assembly and register it on your local development computer.
- D. Add the description file for the XML Web service to your Visual Studio .NET project.

Answer: B

Explanation:

Ordinarily to access an XML Web service from a client application, you first add a Web reference, which is a reference to an XML Web service. When you create a Web reference, Visual Studio creates an XML Web service proxy class automatically and adds it to your project.

However, you can manually generate a proxy class using the XML Web services Description Language Tool, Wsdl.exe, used by Visual Studio to create a proxy class when adding a Web reference. This is necessary when you are unable to access the XML Web service from the machine on which Visual Studio is installed, such as when the XML Web service is located on a network that will not be accessible to the client until run time. You then manually add the file that the tool generated to your application project.

Reference:

Visual Basic and Visual C# Concepts, Locating XML Web Services Visual Basic and Visual C# Concepts, Generating an XML Web Service Proxy

Question: 45. (A)

You develop a Windows-based application that includes the following code segment. (Line numbers are included for reference only.)

```
01 Public Sub password_Validating (ByVal sender As _ 02 Object, ByVal e As _ 03 System.ComponentModel.CancelEventArgs) 04 Handles password.Validating 05 If ValidPassword() = False Then 06 'Insert new code. 07 End If 08 End Sub
```

You must ensure that users cannot move control focus away from textPassword if ValidPassword returns a value of False. You will add the required code on line 6.

Which code segment should you use?

- A. e.Cancel = True
- B. sender = textName
- C. password.AcceptsTab = False
- D. password.CausesValidation =False

Answer: A

Explanation:

We cancel the validation of the control.

Reference:

Visual Basic Reference, CausesValidation Property (ActiveX Controls) Visual Basic Reference, Validate Event (ActiveX Controls)

Incorrect Answers

B: This assignment does not make much sense.

C: Does not apply.

D: Setting Causevalidation to False would disable the Validate event. This will not prevent the focus to moved away from the control.

Question: 46. (A)

You develop a Windows-based application that contains a class named Contact. Contact contains an event named ContactSaved. Many Contact objects will be created from the Contact class and inserted into an array named Contacts.

You create a custom method named HandleContactSaved in your application. You must ensure that your application calls HandleContactSaved whenever the ContactSaved event is fired for any of the Contact objects.

What should you do?

- A. Use the WithEvents keyword to declare each Contact object. Add each Contact object to the Contacts array as it is created.
- B. Add each Contact object to the Contacts array as it is created Add the Handles keyword to HandleContactSaved.
- C. Add each Contact object to the Contacts array as it is created. Assign HandleContactSaved to the Handle property of the HandleRef structure.
- D. Add each Contact Object to the Contacts array as it is created. Call the AddHandler statement and pass the new Contact object and the address of HandleContactSaved.

Answer: D

Explanation:

The standard way to create an event handler is to use the Handles keyword with the WithEvents keyword. You can use the AddHandler statement to dynamically connect events with event handler procedures. To handle events using AddHandler

- 1 Declare an object variable of the class that is the source of the events you want to handle.
- 2 Use the AddHandler statement to specify the name of the event sender, and the AddressOf statement to provide the name of your event handler.

Reference:

Visual Basic Language Concepts, Writing Event Handlers

Incorrect Answers

A: We would have to use a Handles clause for the HandleContactSaved method as well. Only declaring WithEvents is not sufficient.

B: The Handles keyword is used to declare that a procedure handles a specified event. We must however specify the event.

C: This proposed solution does not work.

Question: 47. (A)

You develop a Windows Form that provides online help for users. You want the help functionality to be available when users press the F1 key. Help text will be displayed in a pop-up window for the text box that has focus.

To implement this functionality, you need to call a method of the HelpProvider control and pass the text box and the help text.

Which method should you call?

- A. SetShowHelp
- B. SetHelpString
- C. SetHelpKeyword
- D. ToString

Answer: B

Explanation:

To associate a specific Help string with another control, use the SetHelpString method. The string that you associate with a control using this method is displayed in a pop-up window when the user presses the F1 key while the control has focus.

Reference:

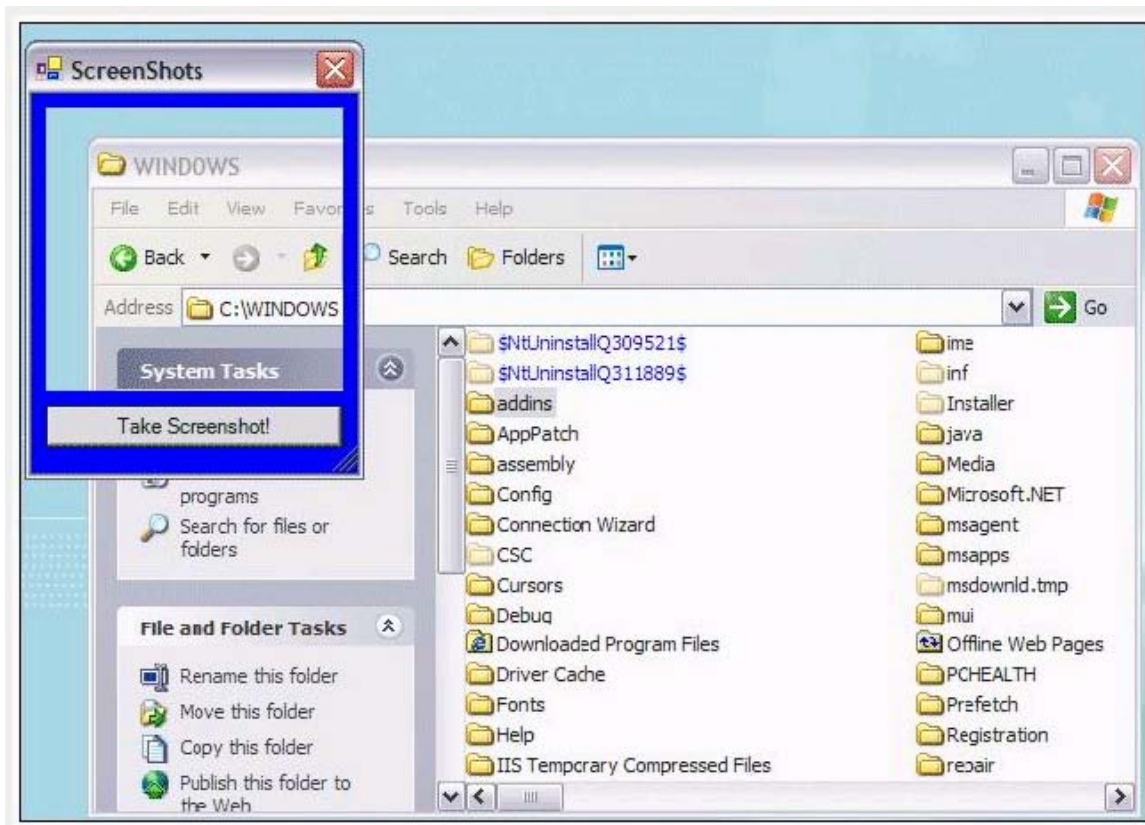
Visual Basic and Visual C# Concepts, Introduction to the Windows Forms HelpProvider component

Question: 48. (A)

You use Visual Studio .NET to create a Windows-based application. The application captures screen shots of a small portion of the visible screen.

You create a form named XYZCameraForm. You set the XYZCameraForm.BackColor property to Blue. You create a button on the form to enable users to take a screen shot.

Now, you need to create a transparent portion of XYZCameraForm to frame a small portion of the screen. Your application will capture an image of the screen inside the transparent area. The resulting appearance of XYZCameraForm is shown in the exhibit:



You add a Panel control to XYZCameraForm and name it transparentPanel. You must ensure that any underlying applications will be visible within the panel.

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

- A. Set transparentPanel.BackColor to Red.
- B. Set transparentPanel.BackColor to Blue.
- C. Set transparentPanel.BackgroundImage to None.
- D. Set transparentPanel.Visible to False.
- E. Set CameraForm.Opacity to 0%.
- F. Set CameraForm.TransparencyKey to Red.
- G. Set CameraForm.TransparencyKey to Blue..

Answer: A & F

Explanation:

A: We set the Background color of the Panel to Red.

F: We then the transparency color of the Form to Red as well. This will make only the Panel transparent, since the background color of the form is Blue.

Question: 49. (A)

You use Visual Basic .NET to develop a Windows-based application. You plan to reuse a procedure written in Visual Basic 6.0. The procedure includes the following array declaration:

Dim Employees(1 to 10) As String

You copy and paste the array declaration from the Visual Basic 6.0 project into the new Visual Basic .NET project. Now you must ensure that the Employees array will compile in the Visual Basic .NET application.

What should you do?

- A. Include the Option Base 1 statement in the Declaration section of the module.
- B. Include the Option Base 0 statement in the Declaration section of the module.
- C. Replace the Dim statement with the following code segment: Dim Employees(0 to 9) As String
- D. Replace the Dim statement with the following code segment: Dim Employees(9) As String
- E. After the Dim statement, add the following code segment: ReDim Employees(0 to 9) As String
- F. After the Dim statement, add the following code segment: ReDim Employees(9) As String

Answer: D

Explanation:

Array lower bounds is supported in Visual Basic 6.0, but not in Visual Basic .Net..

Reference:

Visual Basic Language Reference, Dim Statement

Question: 50. (A)

As a software developer at XYZ inc. you use Visual Studio .NET to create a Windows-based application. You need to make the application accessible to users who have low vision. These users navigate the interface by using a screen reader, which translates information about the controls on the screen into spoken words. The screen reader must be able to identify which control currently has focus.

One of the TextBox controls in your application enables users to enter their names. You must ensure that the screen reader identifies this TextBox control by speaking the word "name" when a user changes focus to this control. Which property of this control should you configure?

- A. Tag
- B. Next
- C. Name
- D. AccessibleName
- E. AccessibleRole

Answer: D

Explanation:

The AccessibleName property is the name that will be reported to the accessibility aids.

Reference:

Visual Basic and Visual C# Concepts, Providing Accessibility Information for Controls on a Windows Form Visual Basic and Visual C# Concepts, Walkthrough: Creating an Accessible Windows Application

Incorrect Answers**A, B, C:** The Tag, Next and Name properties of a control is not used directly by accessibility aids.

E: The AccessibleRole property describes the use of the element in the user interface.

Question: 51. (A)

You use Visual Studio .NET to develop a Windows-based application. The application includes several menu controls that provide access to most of the application's functionality.

One menu option is named calculateOption. When a user chooses this option, the application will perform a series of calculations based on information previously entered by the user.

To provide user assistance, you create a TextBox control named XYZHelp. The corresponding text box must display help information when the user pauses on the menu option with a mouse or navigates to the option by using the arrow keys.

You need to add the following code segment:

```
XYZHelp.Text = "This menu option calculates the result..";
```

In which event should you add this code segment?

- A. calculateOption_Click
- B. calculateOption_Popup
- C. calculateOption_Select
- D. calculateOption_DrawItem
- E. calculateOption_MeasureItem

Answer: C

Explanation:

The Select event is raised when a menu item is highlighted. We should use the Select event to set the helper text.

Reference:

70-306/70-316 Training kit, Using Menu Item Events, Page 79

Incorrect Answers

A: The Click event occurs when a menu item is selected.

B: The Popup event is raised just before a menu item's list of menu items is displayed. It can be used to enable and disable menu items at run time before the menu is displayed.

D: The DrawItem event handler provides a Graphics object that enables you to perform drawing and other graphical operations on the surface of the menu item.

E: The MeasureItem event occurs when the menu needs to know the size of a menu item before drawing it.

Question: 52. (B)

You create an assembly by using Visual Studio .NET. The assembly is responsible for writing and reading order entry information to and from an XML data file. The assembly also writes and reads values to and from the Windows registry while it is being consumed.

The assembly will be distributed to client computers by using your company, XYZ, intranet. All client computers are configured to implement the default .NET security policy.

You need to implement security in the assembly. What should you do?

- A. Implement declarative security and execute the permission demand to allow access to the file system and Windows registry.
- B. Implement declarative security and execute the minimum permission request to allow access to the file system and Windows registry.
- C. Implement imperative security and execute the permission demand to allow access to the file system and Windows registry.
- D. Implement imperative security and execute the minimum permission request to allow access to the file system and Windows registry.

Answer: B

Explanation:

You can use declarative code access security to request permissions for the entire assembly. Security Action flags that can be specified in an assembly-wide directive. When `SecurityAction.RequestMinimum` is specified, it makes a request to the common language runtime to be granted the requested permission. If the requested permission is not granted by the security policy, the assembly will not execute.

A `SecurityAction.RequestOptional` is similar, but the assembly will still run even if the requested permission is not granted. Specifying `SecurityAction.RequestRefuse` requests that the assembly be denied the specified permission.

Reference:

70-306/70-316 Training kit, Declarative Code Access Security, Pages 457-458

Incorrect Answers

A: There are only three Security actionAttributes targets for an assembly: `RequestMinimumAssembly`, `RequestOptionalAssembly`, and `RequestRefuseAssembly`. **C, D:** Imperative security does not work well to configure security for an entire assembly. In imperative security, permission to execute is demanded at run time.

Question: 53. (B)

You create an assembly by using Visual Studio .NET. The assembly is consumed by other .NET applications to manage the creation and deletion of XML data files.

The assembly includes a method named `DeleteXYZXMLFile` that uses the Win32 API to delete the XML data files. A security exception is thrown when `DeleteXYZXMLFile` is called from another .NET application.

You must modify `DeleteXMLFile` to ensure that this method can execute functions exposed by the Win32 API. To do so, you create a `SecurityPermission` object that represents the right to call unmanaged code.

Which method of the `SecurityPermission` object should you call?

- A. Assert
- B. Demand
- C. PermitOnly
- D. RevertDeny

Answer: A

Explanation:

The `CodeAccessPermission.Assert` Method asserts that calling code can access the resource identified by the current permission through the code that calls this method, even if callers higher in the stack have not been granted permission to access the resource.

Reference:

.NET Framework Class Library, `SecurityPermission` Class [Visual Basic].NET Framework Class Library, `SecurityPermission` Methods .NET Framework Class Library, `CodeAccessPermission.Assert` Method [Visual Basic]

Incorrect Answers

B: The `CodeAccessPermission.Demand` method will not grant proper permission to other .NET applications. It forces a `SecurityException` at run time if all callers higher in the call stack have not been granted the permission specified by the current instance.

C: The `CodeAccessPermission.PermitOnly` method will not grant proper permission to other .NET applications. It prevents callers higher in the call stack from using the code that calls this method to access all resources except for the resource specified by the current instance.

D: `RevertDeny` is not a `SecurityPermission` method.

Question: 54. (B)

You use Visual Studio .NET to create an assembly, called `XYZAssembly`, that will be used by other applications, including a standard COM client application.

You must deploy your assembly on the COM application to a client computer. You must ensure that the COM application can instantiate components within the assembly as COM components.

What should you do?

- A. Create a strong name of the assembly by using the Strong Name tool (`Sn.exe`).
- B. Generate a registry file for the assembly by using the Assembly Registration tool (`Regasm.exe`). Register the file on the client computer.
- C. Generate a type library for the assembly by using the Type Library Importer (`Tlbimp.exe`). Register the file on the client computer.
- D. Deploy the assembly to the global assembly cache on the client computer. Add a reference to the assembly in the COM client application.

Answer: B

Explanation:

The Assembly Registration tool reads the metadata within an assembly and adds the necessary entries to the registry, which allows COM clients to create .NET Framework classes transparently. Once a class is registered, any COM client can use it as though the class were a COM class.

Reference:

.NET Framework Tools, Assembly Registration Tool (`Regasm.exe`)

.NET Framework Tools, Strong Name Tool (`Sn.exe`) .NET Framework Tools, Type Library Importer (`Tlbimp.exe`)

Incorrect Answers

A: The Strong Name tool helps sign assemblies with strong names.

C: The Type Library Importer, `tlbimp.exe`, converts the type definitions found within a COM type library into equivalent definitions in a common language runtime assembly. It would not be useful in this scenario however.

D: This would not allow the COM application to use the class.

Question: 55. (C)

You develop a customer contact application `XYZContact`, that will enable users to view and update customer data in a Windows Form. Your application uses a `DataTable` object and a `DataAdapter` object to manage the data and interact with a central database.

Your application design must fulfill the following requirements:

After a user completes a set of updates, the changes must be written in the database.

The data stored in the `DataTable` object must indicate that the database updates are complete.

What code segment should you use?

- A. `DataTable.AcceptChanges()` `DataAdapter.Update(DataTable)`
- B. `DataAdapter.Update(DataTable)` `DataTable.AcceptChanges()`

C. DataTable.Reset() DataAdapter.Update(DataTable)
D. DataAdapter.Update(DataTable) DataTable.Reset().

Answer: B

Explanation:

First we resolve the changes (update) and then we commit them (AcceptChanges).

Note: The Update method of the DataAdapter is called to resolve changes from a DataSet back to the data source. The DataAdapter analyzes the changes that have been made and executes the appropriate command (INSERT, UPDATE, or DELETE). The DataTable.AcceptChanges Method commits all the changes made to this table since the last time AcceptChanges was called.

Reference:

.NET Framework Class Library, DataTable.AcceptChanges Method [Visual Basic] .NET Framework Developer's Guide, Updating the Database with a DataAdapter and the DataSet [Visual Basic].NET Framework Class Library, DataTable.Reset Method [Visual Basic]

Incorrect Answers

A: We must first update the changes to the DataTable before we commit the data source. We must swap the commands.**C, D:** The DataTable.Reset Method resets the DataTable to its original state. We should instead commit all changes with the AcceptChanges method.

Question: 56. (C)

You develop an order entry application XYZOrderEntry. XYZOrderEntry uses a DataSet object named CurrentEXOrders to maintain data in memory while users modify the data.

To CurrentEXOrders, you add DataTable object named Orders and OrderDetails. OrderDetails contains data about each line item that is included in the order.

Users frequently discover that an order contains no entries in OrderDetails. In these situations they delete the order from Orders.

You must ensure that users cannot delete any orders that have corresponding entries in OrderDetails.

What should you do?

- A. Add a UniqueConstraint object to CurrentEXOrders.
- B. Add a ForeignKeyConstraint object to CurrentEXOrders.
- C. Add a DataRelation object to CurrentEXOrders and set the ChildKeyConstraint property to point to the appropriate column.
- D. Add a DataRelation object to CurrentEXOrders and set the ParentKeyConstraint property to the appropriate column.

Answer: B

Question: 57. (C)

You develop a Windows-based application XYZ App by using Visual Studio .NET. XYZApp implements ADO.NET objects to call Microsoft SQL Server stored procedures. Your database administrator is responsible for coding and maintaining all stored procedures. Periodically, the administrator modifies the stored procedures.

At run time, your application code must discover any changes in the way that values are passed to and returned from the stored procedures.

Which ADO.NET object and method should you use?

- A. CommandBuilder.RefreshSchema
- B. CommandBuilder.DeriveParameters
- C. SqlCommand.CreateParameter
- D. SqlDataAdapter.GetFillParameters

Answer: B

Question: 58. (C)

You use Visual Studio .NET to develop a Windows-based application that will interact with a Microsoft SQL Server database. Your application will display employee information from a table named XYZEmployees. You use ADO.NET to access the data from the database.

To limit the possibility of errors, you must ensure that any type of mismatch errors between your application code and the database are caught at compile time rather than at run time.

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

- A. Create an XML schema for XYZEmployees.
- B. Create an XML style sheet for XYZEmployees.
- C. Create an XML namespace for XYZEmployees.
- D. Create a typed DataSet object based on the XML schema.
- E. Create a typed DataSet object based on the XML style sheet.
- F. Create a TypeDelegator class based on the XML namespace.

Answer: A & D

Explanation:

A: We need to create an XML schema that describes the structure of the data. : From this XML schema we can create a typed DataSet object.

Incorrect AnswersB, E: There is no such thing as an XML style sheet.

C: Namespaces are used to enable shorthand notation of objects. It does not apply here.

F: Delegates are used for the managed code objects to encapsulate method calls. TypeDelegators do not apply here.

Question: 59. (C)

You develop a Windows-based application that stores and retrieves data in a Microsoft SQL Server database called XYZSales. Your application uses ADO.NET and the SqlClient managed provider. You need to identify the severity level of all errors returned from SQL Server. What should your error-handling code do?

- A. Catch the SqlException that is thrown when the error occurs and access the Source property.
- B. Catch the SqlException that is thrown when the error occurs and access the Class property.
- C. Examine the State property of the SqlConnection object for the status of the connection after the error occurs.
- D. Examine the DataSource property of the SqlConnection object for the status of the connection after the error occurs.

Answer: B

Explanation:The **Class** property of the SqlException class gets the severity level of the error returned from the SQL Server .NET Data Provider.

Reference:

.NET Framework Class Library, SqlException Class [Visual Basic] .NET Framework Class Library, SqlException Members .NET Framework Class Library, SqlConnection Members

Incorrect Answers

A: The **Source** property of the SqlException class gets the name of the provider that generated the error.

C: The **State** property of the SqlConnection object only gets the current state of the connection.

D: The **DataSource** property of the SqlConnection object only gets the name of the instance of SQL Server to which to connect.

Question: 60. (C)

You use Visual Studio .NET to develop a Windows-based application that interacts with a Microsoft SQL Server database. Your application contains a form named CustomerForm, which includes the following design-time components:

SqlConnection object named XYZConnection.

SqlDataAdapter object named XYZDataAdapter.

DataSet object named XYZDataSet, based on a database table named Customers.

At run time you add a TextBox control named textCompanyName to CustomerForm. You execute the Fill method of XYZDataAdapter to populate Customers. Now you want to use data binding to display the CompanyName field exposed by XYZDataSet in textCompanyName. Which code segment should you use?

A. textCompanyName.DataBindings.Add("Text", XYZDataSet, "CompanyName")

B. textCompanyName.DataBindings.Add("Text", XYZDataSet, "Customers.CompanyName")

C. textCompanyName.DataBindings.Add("Text", XYZDataAdapter, "CompanyName")

D. textCompanyName.DataBindings.Add("Text", XYZDataAdapter, "Customers.CompanyName").

Answer: B

Question: 61. (C)

You execute a query on your external Oracle database named XYZSalesDate by using an OleDbCommand object. The query uses the Average function to return a single value that represents the average price of products in the inventory table. You want to optimize performance when you execute this query.

To execute this query from your ADO.NET code, you need to use a method of the OleDbCommand object. Which method should you use?

A. ExecuteNonQuery

B. ExecuteScalar

C. ToString

D. ExecuteReader

Answer: B

Explanation:

The ExecuteScalar method returns the first column of the first row of data returned by the command, no matter how many rows the command actually selects.

Reference:

70-306/70-316 Training kit, The Command Object, Pages 252-253

Incorrect Answers

A: .The ExecuteNonQuery method executes the data command, but returns no value.

C: The command object has no ToString method.

D: The ExecuteReader method returns a DataReader object that can iterate through a result set in a forwardonly, read-only manner without involving a DataAdapter.

Question: 62. (C)

You create a Visual Studio .NET setup project to distribute an application. You add a SQL script named XYZDB.SQL. You must ensure that the SQL script is executed during the installation process. What should you do?

- A. Add a custom action to your setup project. Select XYZDB.SQL as the source path.
- B. Add a batch file to your setup project to execute XYZDB.SQL.
Add a launch condition to the setup project.
Set the Condition property to the batch file.
- C. Create a new Visual Studio .NET project that executes XYZDB.SQL. Include the new project with your setup project. Add a custom action that launches the new project during installation.
- D. Add a launch condition to your setup project. Set the Condition property to XYZDB.SQL.

Answer: A

Explanation:

By adding the SQL script as a custom action to the setup project we ensures that it will be executed during the installation process.

Note:

Although standard actions are sufficient to execute an installation in most cases, custom actions enable the author of an installation package to extend the capabilities of standard actions by including executables, dynamic-link libraries, and script.

Reference:

Platform SDK: Windows Installer, About Custom Actions

Incorrect Answers**B, D:** The execution of a batch file cannot be used as a launch condition.

C: This is a very awkward solution. We don't need to create a second project.

Question: 63. (C)

You develop a Windows-based application XYZInvoice that enables users to enter and edit customer orders. XYZInvoice contains a DataSet object named orderEntryDataSet and DataTable object named orderDataTable and orderDetailDataTable. The orderDetailDataTable requires two columns to make a unique primary key.

You need to define a primary key for orderDetailDataTable.

What should you do?

- A. Set the DataTable.PrimaryKey property to a string value that lists the column names that make the primary key.
- B. Set the DataTable.PrimaryKey property to an array of DataColumn objects that reference the columns that make the primary key.
- C. Iterate through the DataTable.Columns collection and set the DataType property of the columns that make the primary key.
- D. Create a UniqueConstraint on the columns that make the primary key.

Answer: B

Explanation:

DataTable.PrimaryKey Property gets or sets an array of columns that function as primary keys for the data table.

Reference:

.NET Framework Class Library, DataTable.PrimaryKey Property [Visual Basic]

Incorrect Answers

A: An array of columns, not a string value, is used with the PrimaryKey property.

C: There can be only one primary key in a DataTable.

D: The PrimaryKey property, not the UniqueConstraint, must be used. The PrimaryKey property enforces uniqueness as well.

Question: 64. (C)

You develop a Windows-based inventory management application that interacts with a Microsoft SQL Server database. Your application enables users to update information about items in inventory. Each time a user changes an inventory item, your application executes a SQL Server stored procedure XYZSP to update rows in the database. XYZSP will run many times during each user session.

Your application will use a SqlCommand object to execute XYZSP. You must revise your code so that the use of this object optimizes query performance.

What should you do?

- A. Call the SqlCommand.DeriveParameters method before each call to SqlCommand.ExecuteNonQuery.
- B. Call the SqlCommand.Prepare method before each call to SqlCommand.ExecuteNonQuery.
- C. Call the SqlCommand.DeriveParameters method before the first call to SqlCommand.ExecuteNonQuery.
- D. Call the SqlCommand.Prepare method before the first call to SqlCommand.ExecuteNonQuery.

Answer: D

Explanation:

The SqlCommand.Prepare Method creates a prepared version of the command on an instance of SQL Server. It prepares a compiled version of the command on the data source. We only need to compile the stored procedure once. Compiling the procedure would improve performance since it will run many times.

Note:

Deriving parameter information does require an added trip to the data source for the information. If parameter information is known at design-time, you can improve the performance of your application by setting the parameters explicitly.

Reference:

.NET Framework Developer's Guide, Using Stored Procedures with a Command [Visual Basic] .NET Framework Class Library, SqlCommandBuilder.DeriveParameters Method [Visual Basic] .NET Framework Class Library, SqlCommand.Prepare Method [Visual Basic]

Incorrect Answers A, C: We cannot be sure that the parameters are known at design time. So we cannot use the DeriveParameters method.

B: We don't need to prepare (compile) the stored procedure before each call.

Question: 65. (C)

You plan to develop a customer information application CustomEX that uses a Microsoft SQL Server database. CustomEX will be used frequently by a large number of users. Your application code must obtain the fastest possible performance when accessing the database and retrieving large amounts of data. You must accomplish this goal with the minimum amount of code. How should you design CustomEX?

- A. Use classes in the System.Data.OleDb namespace.
- B. Use classes in the System.Data.SqlClient namespace.
- C. Use remoting to connect to the SQL Server computer.
- D. Use interoperability to include legacy COM-based data access components.

Answer: B

Explanation:

The System.Data.SqlClient namespace is the SQL Server .NET Data Provider. It gives the best performance for accessing the Microsoft SQL Server database.

Reference:

.NET Framework Class Library, System.Data.SqlClient Namespace .NET Framework Class Library, System.Data.OleDb Namespace .NET Framework Developer's Guide, .NET Remoting Overview

Incorrect Answers

A: The System.Data.OleDb namespace is the OLE DB .NET Data Provider.

C: Microsoft .NET Remoting technology provides a framework for distributing objects across different process boundaries and machine boundaries. It would not be the fastest solution.

D: Legacy COM-based data access components would not be optimal for performance.

Question: 66. (C)

You develop a Windows-based application. You plan to use ADO.NET to call a Microsoft SQL Server stored procedure named EmployeeData. This procedure accepts a parameter for querying the database by an employee's family name.

You need to add code to your application to set up the parameter for use with the stored procedure.

Which three lines of code should you add? (Each correct answer presents part of the solution. Choose three.)

- A. Dim parm1 As New SqlParameter()
- B. Dim parm1 As New SqlParameter("@FamilyName", _ SqlDbType.VarChar)
- C. parm1.Direction = ParameterDirection.Input
- D. parm1.Direction = ParameterDirection.InputOutput
- E. cmd.Parameters.Add(parm1)
- F. parm1.Add(cmd)

Answer: B, C & E

Explanation:

B: The names of the parameter added must match the names of the parameter markers in your stored procedure.

C: The parameter is used as an input parameter.

E: We add the parameter to the command.

Reference:

.NET Framework Class Library, SqlParameter Class [Visual Basic] .NET Framework Class Library, SqlParameter Members .NET Framework Class Library, SqlParameter Constructor () [Visual Basic] .NET Framework Class Library, SqlParameter Constructor (String, SqlDbType) [Visual Basic]

Incorrect Answers

A: We should specify the name of the parameter and its value.

D: The parameter is an input parameter, not an input/output parameter.

F: The parameter should be added to the command, not vice versa.

Question: 67. (C)

You develop a contact management application called XYZManagement that will enable users to retrieve information from a central database. After the data is returned to XYZManagement, users must be able to view it, edit it, add new records, and delete existing records. All user changes must then be saved in the database.

XYZManagement design requires several ADO.NET objects to work together to accomplish these requirements. You use classes from the System.Data and System.Data.OleDb namespaces.

First you write the code to connect to the database. Which four actions should you take next? (Each correct answer presents part of the solution. Choose four.)

- A. Create an OleDbDataAdapter object and define the SelectCommand property.
- B. Create an OleDbCommand object and use the ExecuteScalar method.
- C. Create a DataTable object as a container for the data.
- D. Create a DataSet object as a container for the data.
- E. Call the DataAdapter.Fill method to populate the DataSet object.
- F. Call the DataAdapter.Update method to populate the DataSet object.
- G. Call the DataAdapter.Update method to save changes to the database.
- H. Call the DataSet.AcceptChanges method to save changes to the database.

Answer: A, D, E & G

Explanation:

A: First we must create a DataAdapter.

D: We then use a DataSet object as a container for the data.

E: We use the Fill method to populate the DataSet.

G: Finally we update the data source with the Update method.

Reference:

Visual Basic and Visual C# Concepts, Introduction to Dataset Updates .NET Framework Developer's Guide, Using .NET Data Providers to Access Data .NET Framework Class Library, DbDataAdapter.Fill Method [Visual Basic] .NET Framework Developer's Guide, Updating the Database with a DataAdapter and the DataSet [Visual Basic]

Incorrect Answers

B: We need a DataAdapter to populate the DataSet.

C: DataTables contains the actual data. We must a DataSet instead. A DataSet is an in-memory representation of relational data.

F: The Fill method, not the Update method, is used to populate the DataSet.

H: The AcceptChanges method is to commit the pending changes to the Dataset, not to the data source (the database).

Question: 68. (C)

Your development team creates an order entry application by using Visual Studio .NET. The application stores and retrieves data in a

Microsoft SQL Server database. All database connections in the application are centralized in class variables within a class named MyDataClass. Each time your application needs to access data from the database, it creates an instance of MyDataClass by using the following code segment:

```
Dim oData As New MyDataClass()
```

When the oData variable is no longer needed, it is set to Nothing or goes out of scope. Initially, about 500 sales representatives use the application. Later, your company hires 500 newsales representatives who also use the application. You discover that the database is running out of available connections because of the increases usage. You must ensure that database connections are released immediately when they are no longer needed. You must also maintain an optimum level of application performance. What should you do?

- A. Add the procedure Protected Overrides Finalize() to My DataClass. Write code in the procedure to close all open database connections.
- B. Add the procedure Private Sub Finally() to MyDataClass. Write the code in the procedure to close all open database connections.
- C. Implement the IDisposable interface within My DataClass. Write code in the Dispose procedure of IDisposable to close all open database connections. Call the Dispose method of MyDataClass before any reference to MyDataClass is set to Nothing or goes of scope.
- D. Find each location in your code where a reference to MyDataClass is set to nothing or goes out of Scope. Add code after each instance to manually invoke the Visual Studio .NET garbage collector.
- E. Add code to the Terminate event of MyDataClass to close all open database connections.
- F. Ensure that each reference to MyDataClass is set to Nothing before it goes of scope.

Answer: A

Explanation:

The Object.Finalize Method allows an Object to attempt to free resources and perform other cleanup operations before the Object is reclaimed by garbage collection. By adding code that closes all open database connections for this method of the class, we would ensure that all connections would be released.

Reference:

.NET Framework Class Library, Object.Finalize Method Visual Basic Language Concepts, Object Lifetime: How Objects Are Created and Destroyed

Incorrect Answers

B: There is no method called Finally.

C: This is a possible solution. However, it is not the most straightforward or effective solution.

D: Calling the garbage collection frequently would increase overhead.

E: The Terminate event was used in Visual Basic 6.0. It has been replaced by the Finalize method.

F: Setting the instances of the class to nothing would not close the database connections.

Question: 69. (C)

You use Visual Studio .NET to develop a Microsoft Windows-based application. Your application contains a form named CustomerForm, which includes the following design-time controls:

SQLConnection object named XYZConnection

SQLDataAdapter object named XYZDataAdapter

DataSet object named CustomerDataSet

Five TextBox controls to hold the values exposed by CustomerDataSet

Button control named saveButton

At design time you set the DataBindings properties of each TextBox control to the appropriate column in the DataTable object of CustomerDataSet.

When the application runs, users must be able to edit the information displayed in the text boxes. All user changes must be saved to the appropriate database when saveButton is executed. The event handler for saveButton includes the following code segment:

```
XYZDataAdapter.Update(CustomerDataSet)
```

You test the application. However, saveButton fails to save any values edited in the text boxes.

You need to correct this problem.

What should your application do?

- A. Call the InsertCommand method of XYZDataAdapter.
- B. CALL THE Update method of XYZDataAdapter and pass in XYZConnection.
- C. Before calling the Update method, ensure that a row position change occurs in CustomerDataSet.
- D. Reestablish the database connection by calling the Open method of XYZConnection.

Answer: C

Explanation: Not B:

There is no connection parameter in the Update method of the DataAdapter class.

Reference:

Visual Basic and Visual C# Concepts, Dataset Updates in Visual Studio .NET .NET Framework Class Library, SqlDataAdapter Constructor (String, SqlConnection) [C#]

Question: 70. (C)

You develop a Windows-based application that contains a class named XYZContact. XYZContact used ADO.NET to interact with a Microsoft SQL Server database. XYZContact requires an active connection to the database while it is being consumed.

You must ensure that all resources used by XYZContact are properly releases as soon as the class stops being consumed.

What should you do?

- A. In Contact, create a Sub procedure named Finalize to override System.Object.Finalize. Place the appropriate cleanup code in the Finalize procedure and call MyBase.Finalize.
- B. In Contact, create a Sub procedure named Closed. Place the appropriate cleanup code in the Closed procedure.
- C. Implement the Dispose method of the IDisposable interface. Place the appropriate cleanup code in the implemented Dispose method.. Call the Dispose method of your form before releasing the reference.
- D. Implement the Finalize method if the System.Windows.Form interface. Place the appropriate cleanup code in the implemented Finalize method. Call the Dispose method of your form before releasing the reference.

Answer: C

Explanation:

We implement the IDisposable interface. It has one method Dispose. We implement the Dispose method to release the open database connections. We must explicitly call Dispose method when the resources should be released.

Reference:

Visual Basic Language Concepts, Object Lifetime: How Objects Are Created and Destroyed .NET Framework Developer's Guide, Overriding the Finalize Method

Incorrect Answers A, D: As a good practice an object's Finalize method should not call a method on any objects other than that of its base class. It is inappropriate to close database in the Finalize method of the form.

B: A forms closed event occurs when the form is closed.Cleanup code should not be placed in procedure named Closed. We could not be absolutely sure that the database is no longer used.

Question: 71. (C)

You develop a Windows-based application named Payroll. Your application receives information in the form of an XML data file named dataFile. This file does not include any schema information. You need to write code to load the XML data into a DataSet object.

Which code segment should you use?

- A. Dim ds As New DataSet("PayrollData")
ds.readXml(dataFile, _ XmlReadMode.IgnoreSchema)
- B. Dim ds As New DataSet("PayrollData")
ds.readXml(dataFile, XmlReadMode.InferSchema)
- C. Dim ds As New DataSet("PayrollData")
ds.readXml(dataFile, _ XmlReadMode.ReadSchema)
- D. Dim ds As New DataSet("PayrollData")
ds.readXml(dataFile, _ XmlReadMode.Fragment)

Answer: B

Explanation:

XmlReadMode InferSchema ignores any inline schema, infers schema from the data and loads the data.

Reference:

.NET Framework Class Library, XmlReadMode Enumeration [Visual Basic] .NET Framework Class Library, DataSet.ReadXml Method (String, XmlReadMode) [Visual Basic]

Incorrect Answers

A: XmlReadMode IgnoreSchema ignores any inline schema and reads data into the existingDataSet schema. We do not have any schema here however.

C: XmlReadMode ReadSchema reads any inline schema and loads the data. There is no inline schema however.

D: XmlReadMode Fragment is not used with a datafile. It reads XML documents, such as those generated by executing FOR XML queries, against an instance of SQL Server.

Question: 72. (C)

You develop a Windows-based customer service application that includes a search feature. Users will enter characters in a text box to look up customer information by family name. For convenience, users must be able to perform a search by entering only the first few characters of the family name. To enable this functionality, your application will capture the users input and stores it in a variable named EXName. Your application must then submit a Microsoft SQL Server query to the central customer service database.

How should you write the query?

- A. SQL = "SELECT PersonalName, FamilyName FROM " & _ "Customers WHERE FamilyName = " & EXName & "%"

- B. SQL = "SELECT" PersonalName, FamilyName FROM " & _ "Customers WHERE FamilyName LIKE "" & EXName & "%""
C. SQL = SELECT PersonalName, FamilyName FROM " & _ "Customers WHERE FamilyName = "" & EXName & "*"""
D. SQL = "SELECT PersonalName, FamilyName FROM " & _ "Customers WHERE FamilyName LIKE "" & EXName & "*"""

Answer: B

Explanation:

The SQL server LIKE Transact-SQL command LIKE determines whether or not a given character string matches a specified pattern. % is used as a wildcard character.

Reference:

SQL Server Books Online, LIKE

Incorrect Answers

A: We must use the LIKE keyword.

C: We must use the LIKE keyword with the % wildcard character.

D: %, not *, is used as a wildcard character.

Question: 73. (C)

You develop a Windows-based application that connects to a Microsoft SQL Server database. Errors sometimes occur when users execute stored procedures in the database. You need to add error-handling code to your application to capture detailed information about any stored procedure that causes an error.

Which code segment should you use?

A. Try XYZConnection.Open() Catch e As
Exception
'Insert error-handling code.
End Try

B. Try XYZConnection.Open() Catch e As
SqlException
'Insert error-handling code.
End Try

C. Try XYZConnection.Open() Catch e As
DataException
'Insert error-handling code.
End try

D. Try XYZConnection.Open() Catch e As
DBConcurrencyException
'Insert error-handling code. End Try

Answer: B

Explanation:

SqlException Class implements the exception that is thrown when SQL Server returns a warning or error.

Reference:

.NET Framework Class Library, SqlConnection Class [Visual Basic]

Question: 74 (C)

You develop a Windows-based application that accesses a Microsoft SQL Server database. The application includes a form named CustomerForm, which contains a Button control named SortButton.

The database includes a table named Customers. Data from Customers will be displayed on CustomerForm by means of a DataGridView control named DataGridView1. The following code segment is used to fill DataGridView1:

```
Private Sub FillDataGridView() Dim oConn As New SqlConnection(MyConnectionString) Dim oDA As New SqlDataAdapter( _  
    "SELECT CustomerID, CompanyName, ContactName, " & _  
    "Phone FROM Customers", oConn) Dim oDS As New DataSet() oDA.MissingSchemaAction =  
MissingSchemaAction.AddWithKey oDA.Fill(oDS, "Customers") Dim oDV As New  
DataGridView(oDS.Tables("Customers"))oDV.Sort = "CustomerName ASC, ContactName ASC" oDV.ApplyDefaultSort = True  
DataGridView1.DataSource = oDV  
End Sub
```

The primary key for Customers is the CustomerID column. You must ensure that the data will be displayed in ascending order by primary key when the user selects SortButton. What should you do?

- A. Set the Sort property of the DataView object to an empty string.
- B. Set the ApplyDefaultSort property of the DataView object to False.
- C. Include an ORDER BY clause in the SELECT statement when you create the DataAdapter object.
- D. Set the RowFilter property of the DataView object to CustomerID.

Answer: A**Explanation:**

You can use the ApplyDefaultSort property to automatically create a sort order, in ascending order, based on the primary key column or columns of the table. ApplyDefaultSort only applies when the Sort property is a null reference or an empty string, and when the table has a primary key defined.

All requirements are met:

- The ApplyDefaultSort is set to true (see code above).

- The Table has a primary key

- The Sort property is set to the empty string. The DataView will be sorted in ascending order on the Primary Key column.

Reference:

.NET Framework Developer's Guide, Sorting and Filtering Data Using a DataView [Visual Basic]

Incorrect Answers

B: We want to use the default sort order. We should keep the value of ApplyDefaultSort property set to True.

C: It is not necessary to include a ORDER BY clause in the SELECT statement.

D: We want to sort the DataView, not to filter it.

Question: 75. (C)

You develop a Windows-based application that enables users to update customer contact information.

Your application uses a DataSet object to maintain the customer data while users are reviewing and editing it. When a user finishes updating the data, your application uses the DataSet.WriteXml method to create an XML data file.

The tag name of the root element of the XML data file must be <XYZCustomerInfo>. You need to add code to your application to ensure that this tag name is set correctly.

Which code segment should you use?

- A. dsCustomer.Namespace = "XYZCustomerInfo"
- B. dsCustomer = New DataSet("XYZCustomerInfo")
- C. dcCustomer.Prefix = "XYZCustomerInfo"
- D. dsCustomer.WriteXml("XYZCustomerInfo")

Answer: A

Explanation:

The DataSet.Namespace Property gets or sets the namespace of the DataSet. The Namespace property is used in the root element of the XML data file generated from the dataset.

Reference:

.NET Framework Class Library. DataSet.Namespace Property [Visual Basic] .NET Framework Class Library, DataSet.WriteXml Method (XmlWriter) [Visual Basic] .NET Framework Class Library, DataSet.Prefix Property [Visual Basic]

Incorrect Answers

B: The name of the dataset does not decide the name of the root element of the XML data file.

C: The DataSet.Prefix Property gets or sets an XML prefix that aliases the namespace of the DataSet. The Prefix is used throughout an XML document to identify elements which belong to the namespace of the DataSet object as set by the Namespace property.

D: The WriteXml method requires a XmlWriter parameter, not a Text parameter.

Question: 76. (C)

You develop a Windows-Based application that interacts with a Microsoft SQL Server database. The application inserts new rows into the database by calling the following stored procedure. (Line numbers are included for reference only.)

```
01 ALTER PROCEDURE dbo.sp_UpdateXYZPrice 02 ( 03 @category int, 04 @totalprice money OUTPUT 05 ( 06 AS 07 SET
NOCOUNT ON 08 UPDATE Products SET UnitPrice = UnitPrice * 1.1
WHERE CategoryID = @category 09 SELECT @totalprice = sum(UnitPrice) FROM Products 10 SELECT ProductName
FROM Products
WHERE CategoryID = @category 11 RETURN @totalprice.
```

Your application uses the ExecuteReader method of the SqlCommand object to call the storedprocedure and create a SqlDataReader object. After the stored procedure runs, your code must examine the SqlDataReader.RecordsAffected property to verify that the correct number of records is successfully updated.

However, when you execute the stored procedure, the SqlDataReader.RecordsAffected property always returns -1. How should you correct this problem?

- A. Change line 7 to SET ROWCOUNT 0
- B. Change line 7 to SET NOCOUNT OFF
- C. Change line 11 to RETURN 0
- D. Change line 11 to RETURN @category

Answer: B

Explanation:

SqlDataReader.RecordsAffected Property gets the number of rows changed, inserted, or deleted by execution of the Transact-SQL statement. The Transact-SQL SET NOCOUNT command stops the message indicating the number of rows affected by a Transact-SQL statement from being returned as part of the results. When SET NOCOUNT is ON, the count (indicating the number of rows affected by a Transact-SQL statement) is not returned. When SET NOCOUNT is OFF, the count is returned.

Reference:

SQL Server Books Online, SET NOCOUNT .NET Framework Class Library, SqlDataReader.RecordsAffected Property [Visual Basic]

Incorrect Answers

A: The SET NOCOUNT 0 is incorrect. We should use OFF instead of =. **C, D:** We cannot change the functionality of the stored procedure by changing the RETURN statement. Furthermore, returning = or the value of @Category value does not achieve the desired result.

Question: 77. (C)

You develop a Windows-based application that will retrieve employee vacation data and display it in a DataGrid control. The data is managed locally in a DataSet object named employeeDataSet.

You need to write code that will enable users to sort data by department.

Which code segment should you use?

- A. Dim dvDept As New DataView() dvDept.Table = employeeDataSet.Tables(0)
dvDept.Sort = "ASC" DataGrid1.DataSource = dvDept
- B. Dim dvDept As New DataView() dvDept.Table = employeeDataSet.Tables(0)
dvDept.Sort = "Department" DataGrid1.DataSource = dvDept
- C. Dim dvDept As New DataView() dvDept.Table = employeeDataSet.Tables(0)
dvDept.ApplyDefaultSort = True DataGrid1.DataSource = dvDept
- D. Dim dvDept As New DataView() dvDept.Table = employeeDataSet.Tables(0)
dvDept.ApplyDefaultSort = False DataGrid1.DataSource = dvDept

Answer: B**Explanation:**

The DataView.Sort Property gets or sets the sort column or columns. The sort string contains the column name followed by "ASC" (ascending) or "DESC" (descending). Columns are sorted ascending by default. Multiple columns can be separated by commas. The dvDept.Sort = "Department" assignment sorts the view on the Department column.

Reference:

.NET Framework Class Library, DataView.Sort Property [Visual Basic]

Incorrect Answers

A: We must specify the column name, not just the sort order.

C: We don't want to use the default sort. We want to sort on the Department column.

D: Disabling the default sort will not sort on the Department column.

Question: 78. (C)

You develop a Windows-Based application that accesses a Microsoft SQL Server database named XYZ1. Users must supply a user

name and password when they start the application. This information is then used to dynamically build a connection string.

When you test the application, you discover that it is not using the SqlConnection pooling feature.

You must reduce the time needed to retrieve information. How should you modify the connection string?

- A. to use the Windows user logon when connection to the XYZ1 database.
- B. to use the SQL Server used login when connection to the XYZ1 database.
- C. to use the same application logon ID and password for every connection to the XYZ1 database.
- D. to use the guest login ID and password for every connection to the XYZ1 database.

Answer: C

Explanation:

We must use the same connection string to only use one connection pool.

Note:

The performance of the application can be enhanced by having the application share, or "pool," connections to the data source. When a connection is opened, a connection pool is created based on an exact matching algorithm that associates the pool with the connection string in the connection. Each connection pool is associated with a distinct connection string. When a new connection is opened, if the connection string is not an exact match to an existing pool, a new pool is created.

Reference:

.NET Framework Developer's Guide, Connection Pooling for the SQL Server .NET Data Provider Visual Basic and Visual C# Concepts, Introduction to ADO.NET Connection Design Tools

Incorrect Answers

A: If we use different connection strings for different users we would not be using the same connection pool.

D: Using the guest login ID is not good out of security reasons.

Question: 79. (C)

You use Visual Studio .NET to create an application that interact with a Microsoft SQL Server database.

You create a SQL Server stored procedure named XYZOrderDetails and save it in the database. Other developers on your team frequently debug other stored procedures. You need to verify that your stored procedure is performed correctly. You need to step through CustOrderDetails inside the Visual Studio .NET debugger. What should you do?.

- A. Run XYZOrderDetails by using the Visual Studio .NET Server Explorer.
- B. Step into XYZOrderDetails by using the Visual Studio .NET Server Explorer.
- C. From the Command window, use Ctrl+E to run CustOrderDetails.
- D. Move XYZOrderDetails from the Visual Studio .NET Server Explorer window to a Windows Form. Run the application in Debug mode and step though CustOrderDetails.

Answer: B

Explanation:

To debug a stored procedure from Server Explorer:

- 1 Establish a connection to a database using Server Explorer.
- 2 Expand the database name node.
- 3 Expand the Stored Procedures node.
- 4 Right-click the stored procedure you want to debug and choose Step Into Stored Procedure from the shortcut menu.

Reference:

Visual Studio, Debugging SQL Stored Procedures

Question: 80. (C)

You use Visual Studio .NET to develop a Windows-based application that interacts with a Microsoft SQL Server database. Your application contains a form named CustomerForm. You add the following design-time components to the form:

SqlConnection object named XYZConnection
SqlDataAdapter object named XYZDataAdapter.
DataSet object named XYZDataSet.
Five TextBox controls to hold the values exposed by XYZDataSet.

At design time, you set the DataBindings properties of each TextBox controls to the appropriate column in the DataTable object of XYZDataSet. When you test the application, you can successfully connect to the database. However, no data is displayed in any text boxes. You need to modify your application code to ensure that data is displayed appropriately. Which behavior should occur while the CustomerForm.Load event handler is running?

- A. Execute the Add method of the TextBoxes DataBindings collection and pass in XYZDataSet.
- B. Execute the BeginInit method of XYZDataSet.
- C. Execute the Open method of XYZConnection.
- D. Execute the FillSchema method of XYZDataAdapter and pass in XYZDataSet.
- E. Execute the Fill method of XYZDataAdapter and pass in XYZDataSet.

Answer: E

Explanation:

Dataset is a container; therefore, you need to fill it with data. You can populate a dataset by calling the Fill method of a data adapter

Reference:

Visual Basic and Visual C# Concepts, Introduction to Datasets

Question: 81. (C)

You develop a Windows-based application for tracking telephone calls. The application stores and retrieves data by using a Microsoft SQL Server database.

You will use the SQL Client managed provider to connect and send commands to the database.

You use integrated security to authenticate users. Your server is called XYZ30 and the database name is CustomerService.

You need to set the connection string property of the SQL Connection object.

Which code segment should you use?

- A. "Provider=SQLOLEDB.1;Data Source=XYZ30; Initial Catalog=CustomerService"
- B. "Provider=MSDASQL;Data Source= XYZ30; Initial Catalog=CustomerService"
- C. "Data Source= XYZ30;Initial Catalog=Master"
- D. "Data Source= XYZ30; Initial Catalog=CustomerService"

Answer: D

Explanation:

We simply specify the name of the server as Data Source, and the name of database as Initial Catalog.

Reference:

.NET Framework Class Library, OleDbConnection.ConnectionString Property [Visual Basic]

Incorrect Answers

A: We are using SQL Client Object so we cannot use a Provider tag.

B: We are using SQL Client Object so we cannot use a Provider tag. Furthermore, the MSDASQL provider is used for Oracle databases, not for Microsoft SQL Server databases.

C: The database name is CustomerService, not Master.

Question: 82. (C)

You use Visual Studio .NET to create a Windows Form named XYZForm. You add a custom control named BarGraph, which displays numerical data. You create a second custom control named DataBar.

Each instance of DataBar represents one data value in BarGraph.

BarGraph retrieves its data from a Microsoft SQL Server database. For each data value that it retrieves, a new instance of DataBar is added to BarGraph. BarGraph also includes a Label control named DataBarCount, which displays the number of DataBar controls currently contained by BarGraph.

You must add code to one of your custom controls to ensure that DataBarCount is always updated with the correct value.

What are two possible ways to achieve this goal? (Each correct answer presents a complete solution. Choose two)

- A. Add the following code segment to the ControlAdded event handler for DataBar: `Me.DataBarCount.Text = Me.Controls.Count()`
- B. Add the following code segment to the ControlAdded event handler for DataBar: `Me.DataBarCount.Text = Parent.Controls.Count()`
- C. Add the following code segment to the ControlAdded event handler for BarGraph: `DataBarCount.Text = Me.Controls.Count()`
- D. Add the following code segment to the constructor for BarGraph: `Me.Parent.DataBarCount.Text = Me.Controls.Count()`
- E. Add the following code segment to the constructor for DataBar: `Me.Parent.DataBarCount.Text = Me.Controls.Count()`
- F. Add the following code segment to the AddDataPoint method of BarGraph: `DataBarCount.Text = Me.Controls.Count()`

Answer: C & E

Explanation:

We could either catch the ControlAdded event, or add code the constructor. The Control.ControlAdded Event occurs when a new control is added to the Control.ControlCollection. When a control is added to BarGraph we could set the count of controls to the number of current controls in BarGraph. Every time a new DataBar is constructed we could set the counter.

Reference:

.NET Framework Class Library, Control.ControlAdded Event [Visual Basic]

Incorrect Answers**A, B:** Controls are added to BarGraph not to the DataBar.

D: DataBars, not BarGraphs, are constructed.
F: The AddDataPoint method does not apply.

Question: 83. (C)

You develop an enterprise application, called XYZApplication that includes a Windows Forms presentation layer, middle-tier components for business logic and data access, and a Microsoft SQL Server database.

You are in the process of creating a middle-tier component that will execute the data access routines in your application. When data is passed to this component, the component will call several SQL Server stored procedures to perform database updates. All of these procedure calls run under the control of a single transaction.

The code for the middle-tier will implement the following objects:

```
Dim cn As New SqlConnection() Dim tr As SqlTransaction
```

If two users try to update the same data concurrently, errors will occur. You must add code to your component to specify the highest possible level of protection against such errors

Which code should you use?

- A. tr = cn.BeginTransaction("ReadCommitted")
- B. tr = cn.BeginTransaction(IsolationLevel.ReadCommitted)
- C. tr = cn.BeginTransaction(IsolationLevel.Serializable)
- D. tr = cn.BeginTransaction("Serializable")

Answer: C

Explanation:

Serializable is the highest isolation transaction level. It provide the highest possible level of protection against concurrent data errors. The correct syntax to begin a transaction with this transaction isolation level is:

```
cn.BeginTransaction(IsolationLevel.Serializable)
```

Reference:

.NET Framework Class Library, SqlConnection.BeginTransaction Method (IsolationLevel) [Visual Basic].NET Framework Class Library, IsolationLevel Enumeration [Visual Basic]

Incorrect Answers

A: Incorrect syntax.

B: The ReadCommitted transaction isolation level can result in in non-repeatable reads or phantom data. It does not give the highest possible protection from parallel updates.

D: Incorrect syntax.

Question: 84. (C)

You develop a Windows-based application XYZ. XYZ uses a DataSet object that contains two DataTable objects. XYZ will display data from two data tables. One table contains customer information, which must be displayed in a data-bound ListBox control. The other table contains order information, which must be displayed in a DataGrid control.

You need to modify XYZ to enable the list box functionality.

What should you do?

- A. Use the DataSet.Merge method.

- B. Define primary keys for the Data Table objects.
- C. Create a foreign key constraint on the DataSet object.
- D. Add a DataRelation object to the Relations collection of the DataSet object.

Answer: D

Explanation:

We want to use data from both DataTable object. We must relate the DataTable objects. A DataRelation is used to relate two DataTable objects to each other through DataColumn objects. DataRelation objects are contained in a DataRelationCollection, which you can access through the Relations property of the DataSet..

Reference:

.NET Framework Class Library, DataRelation Class [Visual Basic].NET Framework Class Library, DataSet.Merge Method (DataSet) [Visual Basic] .NET Framework Class Library, ForeignKeyConstraint Class [Visual Basic]

Incorrect Answers

A: The Merge method is used to merge two DataSet objects that have largely similar schemas. In this scenario we want combine the information from the DataTable objects, not merge them

B: Creating a primary key for each Data Table object would not relate the DataTable objects.

C: We should use a DataRelation, not a foreign key constraint, to relate the DataTable objects. **Note:** A foreign key constraint represents an action restriction enforced on a set of columns in a primary key/foreign key relationship when a value or row is either deleted or updated.

Question: 85. (C)

You develop an inventory management application called XYZManagement that will call a Microsoft SQL Server stored procedure named sp_GetDailyXYZSales. The stored procedure will run a query that returns your daily sales total as an output parameter.

This total will be displayed to users in a message box. Your application uses a SqlCommand object to run sp_GetDailyXYZSales. You write the following code to call sp_GetDailyXYZSales:

```
Dim cnn As SqlConnection = New SqlConnection(myConnString) Dim cmd As SqlCommand = New
    SqlCommand("sp_GetInventoryLevel", cnn) cmd.CommandType =
CommandType.StoredProcedure Dim parm As SqlParameter = cmd.Parameters.Add( __
    "@ItemTotal", SqlDbType.Int) parm.Direction = ParameterDirection.Output cnn.Open() cmd.ExecuteNonQuery()
```

Now you must write additional code to access the output parameter. Which code segment should you use?

- A. MessageBox.Show("Total is: " & _ cmd.Parameters("@Output").Value.ToString())
- B. MessageBox.Show("Total is: " & _ cmd.Parameters("@Output").ToString())
- C. MessageBox.Show("Total is: " & _ cmd.Parameters("@ItemTotal").Value.ToString())
- D. MessageBox.Show("Total is: " & _ cmd.Parameters("@ItemTotal").ToString())

Answer: C

Explanation:

The @ItemTotal parameter is declared as an output parameter with SQL Server data type INT. We use the Value property of the

SqlParameter class to retrieve the value of this parameter. We must also convert the INT value to a string value with the ToString method. We then supply this string to the MessageBox.Show method.

Reference:

.NET Framework Class Library, SqlParameter Class [Visual Basic] .NET Framework Class Library, SqlParameter.Direction Property [Visual Basic].NET Framework Class Library, SqlParameter.SqlDbType Property [Visual Basic] .NET Framework Class Library, SqlParameter.Value Property [Visual Basic]

Incorrect Answers A, B: The @ItemTotal parameter is the output parameter. Using @Output this way is incorrect. Output is a keyword and no variable named @Output has been declared.

D: We must use the Value method to retrieve the value of the parameter.

Question: 86 (C)

You develop a Windows-based application to manage business contacts. The application retrieves a list of contacts from a central database called XYZDB. The list of contacts is managed locally in a DataSet object named contactDataSet.

To set the criteria for retrieval, your user interface must enable users to type a city name into a TextBox control.

The list of contacts that match this name must be displayed in a DataGrid control. Which code segment should you use?

- A. Dim dv As New DataView() With dv .Table = contactDataSet.Tables(0) .RowFilter = TextBox1.Text End With
DataGrid1.DataSource = dv
- B. Dim dv As New DataView() With dv .Table = contactDataSet.Tables(0) .RowFilter = "City = " & TextBox1.Text & "" End With
DataGrid1.DataSource = dv
- C. Dim dv As New DataView() With dv .Table = contactDataSet.Tables(0) .Sort = TextBox1.Text End With DataGrid1.DataSource = dv
- D. Dim dv As New DataView(). With dv .Table = contactDataSet.Tables(0)
.Sort = "city = " & TextBox1.Text & "" End With DataGrid1.DataSource = dv

Answer: B

Explanation:

To form a RowFilter value, specify the name of a column followed by an operator and a value to filter on. The value must be in quotes. Here we use construct the rowfilter with the = operator, string concatenation (&) and the TextBox1.Text property.

Reference:

.NET Framework Class Library, DataView.RowFilter Property [Visual Basic]

Incorrect Answers

A: We must use the = operator and construct an expression. We cannot just use a value. **C, D:** We want to filter the Dataset, not to sort it.

Question: 87. (C)

You develop a Windows-based application named XYZPurchase that exchanges data with an accounting application. Purchase receives purchase order data from the accounting application in XML format. Users of XYZPurchase review and edit the data.

XYZPurchase maintains the data in a DataSet object while users are working. When they are finished making changes, XYZPurchase must create an output file that will be returned to the accounting application. For verification and auditing purposes, the accounting application must receive both the user changes and the original values. Now you need to write code that will create the

output file.

What should you do?

- A. Call the DataSet.WriteXmlSchema method and specify a TextWriter object as the argument.
- B. Call the DataSet.WriteXmlSchema method and specify an XmlWriter object as the argument.
- C. Call the DataSet.WriteXml method and specify WriteSchema as the XmlWriteMode parameter.
- D. Call the DataSet.WriteXml method and specify DiffGram as the XmlWriteMode parameter.

Answer: D

Explanation:

A DiffGram is an XML format that is used to identify current and original versions of data elements. Here we use the DataSet.WriteXml method with the Diffgram XmlWriteMode to write the entire DataSet as a DiffGram, including original and current values.

Reference:

.NET Framework Developer's Guide, DiffGrams.NET Framework Developer's Guide, Writing a DataSet as XML Data [Visual Basic]

Incorrect AnswersA, B: We want to write the Dataset in XML format, not as an XML schema.

C: The WriteSchema XmlWriteMode writes only the current contents of the DataSet as XML data (with the relational structure as inline XML Schema).

Question: 88 (C)

You are developing a Windows-based application that logs hours worked by your employees. Your design goals require you to maximize application performance and minimize impact on server resources.

You need to implement a SqlCommand object that will send a SQL INSERT action query to a database each time a user makes a new entry.

To create a function named LineltemInser, you write the following code: (Line numbers are included for reference only.)

```
01 Function LineltemInsert(ByVal empid As Integer, _ 02 ByVal projectID As Integer, ByVal hrs As Decimal, _ 03 ByVal cnn As
SqlConnection) As Integer04 Dim SQL As String 05 Dim Ret As Integer 06 SQL = "INSERT INTO TimeEntries " & _ 07 "(EmpID,
ProjectID, Hours) VALUES " & 08 "(" & empID & projectID & ", " & hrs & ")" 09 Dim cmd As New SqlCommand(SQL, cnn) 10 11
'Insert new code. 12 13 End Function
```

Your code must execute the SQL INSERT action query and verify the number of database records that are affected by the query.

Which code segment should you add on line 11?

- A. cnn.Open() Ret = Cmd.ExecuteNonQuery() cnn.Close() Return Ret
- B. cnn.Open() Ret = cmd.ExecuteScalar() cnn.Close() Return Ret
- C. Dim reader as SqlDataReader cnn.Open() reader = cmd.ExecuteReader() cnn.Close() Return reader.RecordsAffected
- D. Dim reader As SqlDataReader cnn.Open() reader = cmd.ExecuteReader() cnn.Close() Return reader.GetValue()

Answer: A

Explanation:

The SqlCommand.ExecuteNonQuery Method Executes a Transact-SQL statement against the Connection and returns the number of

rows affected. This is the most effective solution.

Reference:

.NET Framework Class Library, SqlCommand.ExecuteNonQuery Method [Visual Basic] .NET Framework Class Library, SqlCommand.ExecuteScalar Method [Visual Basic] .NET Framework Class Library, SqlDataReader Class [Visual Basic] .NET Framework Class Library, SqlDataReader.RecordsAffected Property [Visual Basic]

Incorrect Answers

B: The SqlCommand.ExecuteScalar method executes the query, and returns the first column of the first row in the resultset returned by the query. Extra columns or rows are ignored.

C: There is no need use the ExecuteReader() method. **Note:** The SqlDataReader.RecordsAffected property gets the number of rows changed, inserted, or deleted by execution of the Transact-SQL statement.

D: There is no need use the ExecuteReader() method.

Question: 89 (C)

You develop a Windows-based application that creates XML output from a DataSet object. The XML output is created by using the DataSet.WriteXml method and then is sent to another application. The second application requires the output to appear in the following format:

```
<employee id="3" name="XYZSr" age="29" />
```

You need to write code to specify the format for the XML output.

Which code segment should you use?

- A. ds.WriteXml(dataFile, _ XmlWriteMode.WriteSchema)
- B. ds.WriteXml(dataFile, _ XmlWriteMode.IgnoreSchema)
- C. Dim c As DataColumn For Each C in ds.Tables("employee").Columns
 c.ColumnMapping = MappingType.Attribute
Next
- D. Dim c As DataColumn For Each c In ds.Tables("employee").Columns
 c.ColumnMapping = MappingType.Element
Next

Answer: C

Explanation:

We want to produce an attribute list with no tags.

The WriteSchema XmlWriteMode writes the current contents of the DataSet as XML data with the relational structure as inline XML Schema as is required in this scenario.

Reference:

.NET Framework Class Library, MappingType Enumeration .NET Framework Developer's Guide, Writing a DataSet as XML Data [Visual Basic] NET Framework Class Library. DataSet.WriteXml Method [Visual Basic]

Incorrect Answers:

All the other proposed solutions are inadequate since they would produce a tagged output:

```
<employee><id>3</id><name>Paul</name>
<age>29</age> </employee>
```

Question: 90. (D)

You develop a Windows-based time and billing application named XYZBilling. You create a simple user interface to capture user-entered data. The application passes an Object array of user-entered values to a function named AddUpDataTimeEntry. This function uses the LoadDataRow method of the Data Table object either to update an existing record in the table or to add a new record. When you test XYZBilling, you frequently receive an exception of type InvalidCastException. What is the cause of this error?

- A. You are trying to load a duplicate value into a Data Table column that has a unique constraint.
- B. The number of items in your Object array does not match the number of columns in the Data Table object.
- C. The data that you are trying to load into a column is not the correct data type specified for that column.
- D. The columns in your Data Table object do not have the AllowDBNull property set to **True**.

Answer: C

Explanation:

InvalidCastException Class implements the exception that is thrown for invalid casting or explicit conversion. An InvalidCastException could be caused by an incorrect data type.

Question: 91. (D)

You use Visual Studio .NET to create a customer database application for XYZ. Your application contains the following code segment. (Line numbers are included for reference only) 00 Dim oCustomer as Customer 01 for each oCustomer in oCompany.Customers 02 decPostage = CalculatePostage(oCustomer) 03 Next.

When you debug your application, you discover that the CalculatePostage function sometimes produces incorrect results. You suspect that a problem in one of the property values of oCustomer might be causing the error.

oCustomer includes a property named Region that contains the name of the geographical region where the customer resides. The Customers collection of oCompany is sorted by region. As quickly as possible, you need to step through CalculatePostage each time the Region property of oCustomer changes to a new value. What should you do?

- A. Set a breakpoint on line 1. Step through the code after the breakpoint is reached.
- B. Set a breakpoint on line 2. Step through the code after the breakpoint is reached.
- C. Set a breakpoint on line 2. Set its Condition property to oCustomer.Region and select the has changed option.
- D. Set a breakpoint on line 1. Set its Condition property to oCustomer.Region and select the is true option.
- E. Set a breakpoint on line 2. Set its Condition property to oCustomer.Region.Changed and select the is true option.

Answer: C

Question: 92. (D)

You use Visual Studio .NET to create an accounting application. Within this application, you are debugging a function named XYZValidate. This function contains several dozen variables and objects. One of the variables is named bValidationStatus.

You create a breakpoint at the top of XYZValidate and run the application within the Visual Studio .NET IDE.

As you step through the code in XYZValidate, you need to view the contents of the bValidationStatus variable. However, you want to avoid seeing the contents of the other variables and objects in the function. You also need to complete the debugging process as quickly as possible. What should you do?

- A. Open the Locals window.
- B. From the Command window, print the contents of bValidationStatus by using ? bValidationStatus .
- C. Open the **QuickWatch** dialog box for bValidationStatus.

D. Add a watch expression for bValidationStatus.

Answer: D

Explanation:

Watch window updates itself after each step and is easy to open by just right-clicking the bValidationStatus variable and select Add Watch.

Reference:

70-306/70-316 Training kit, The Watch Window, Pages 214-215

Incorrect Answers

A: The Locals Windows would display all variables of the code in the CompanyValidate procedure.

B: This would only display the current value. The requirements of the scenario is that we need to view the variable as we step through the code, not just at a single point of time.

C: The Quickwatch window is a dialog that has to be opened and closed after each debug-step.

Question: 93. (D)

As a developer at XYZ inc. you develop a Windows-based application by using Visual Studio .NET.

The application tracks information about customers, orders, and shipping. Ten users will use this application on the client computers running Windows 2000 Professional.

You deploy the application by copying the contents of the project's \bin folder to the client computers.

Nine users report that the application runs as expected. One user receives the following error message when the application is first executed:

"The dynamic link library mscoree.dll could not be found in the specified path C:\Program Files\Orders App;.;C:\WINNT\System32;C:\WINNT\System;C:\WINNT\System32;C:\WINNT;C:\WINNT\System 32\ Wbem."

You need to correct this problem on the client computer. What should you do?

A. Install MDAC 2.7.

B. Install Internet Explorer 6.

C. Install the redistribute package for the .NET Framework.

D. Recopy the contents of the \bin folder.

Answer: C

Explanation:

If you attempt to run a console application or a Windows Form application from a computer on which the .NET runtime is not installed, you will receive the error "Unable To Locate DLL: The dynamic link library mscoree.dll could not be found in the specified path..." To solve this problem, install the .NET runtime on the computer and try running the application again.

Note:

Mscoree.dll contains the common language runtime.

Reference:

Office Talk, Introducing .NET to Office Developers

Incorrect Answers

A: MDAC (Microsoft Data Access Components) later could be required if the application uses additional features such as ASP.NET, COM+ services, and SQL Server .NET Data Provider. MDAC 2.6 could be required on the client. MDAC 2.7 could be required on the server. Furthermore an older version of MDAC would not produce the error of this scenario.

B: A lack of Internet Explorer 6.0 would not produce this error.

D: This would not resolve the problem

Question: 94. (D)

You use Visual Studio .NET to create a class library project. Another developer named Lilliane uses ASP.NET to create an Internet application for XYZ's Web site. Lilliane deploys your class library to the \bin folder of her ASP.NET application on XYZ's development Web server. She has access to your source code through a share on another network server. Lilliane reports that her application can instantiate and use classes from your class library. However, when she is debugging her application, she cannot step into code within your class library. You must ensure that developers who use your class library can step through the code for debugging purposes. Which three actions should you take? (Each correct answer presents part of the solution. Choose three)

- A. Use the Build Configuration Manager to set the Active Solution Configuration option to **Debug**. Set the Project Configuration to **Debug**. Build your class library.
- B. Add the class library project to the ASP.NET solution.
- C. Copy the .dll file from the Debug folder of the class library project to the \bin folder of the ASP.NET application.
- D. Copy the .pdb file from the Debug folder of the class library project to the \bin folder of the ASP.NET application..
- E. Copy the TempPE folder Debug folder of the class library project to the \bin folder of the ASP.NET application.
- F. Copy the source code for the class library to the ASP.NET application folder on the Web server.
- G. Register the class library on the Web server by using RegSvr32.exe.

Answer: A, C & D

Explanation:

A: First we must build a Debug version of the class library.

C: The Class Library creates a .dll file. This file should be copied to Web Server.

D: In order to debug we need the program database file, the .pdb file. We copy it to the class library folder. This will allow Visual Studio .NET to find it and debugging would be possible. **Note:** A PDB (program database) file holds debugging and project state information that allows incremental linking of a Debug configuration of your program. A PDB file is created when you compile a C/C++ program with /ZI or /Zi or a Visual Basic/C# program with /debug. The Visual Studio debugger uses the project.PDB file created by the linker directly and embeds the absolute path to the PDB in the EXE or DLL file. If the debugger can't find the PDB file at that location or if the path is invalid (for example, if the project was moved to another computer), the debugger searches the path containing the EXE, the Symbol Path specified in the solution's Property Pages (Common Properties folder, Debug Symbol Files page).

Reference:

Visual Studio, Debugging Preparation: Class Libraries Visual Studio, PDB Files

Incorrect Answers

B: We only want to use and debug the class library. We don't need to use the class library project.

E: We only need to copy the dll file of the Class Library, not an entire folder.

F: The source code of the class library is not necessary in order to debug it.

G: Regsrv32.exe was used to register components on computers in Visual Basic 6.0, Visual C++

6.0 etc.

Regsrv32 is not used for components that are produced by Visual Studio .NET.

Question: 95. (D)

You develop a Windows-based application that uses several functions to calculate a given inventory quantity. This quantity is stored in a variable named XYZQuantity.

When you test your application, you discover that the value of XYZQuantity sometimes falls below zero. For debugging purposes, you want your application to generate an error message in such cases. You also want to be able to view the call stack to help identify the function call that is causing the miscalculation.

You need to insert additional code after the calculation of XYZQuantity.

Which code segment should you use?

- A. `Trace.Assert(XYZQuantity >= 0, _ "Inventory cannot be less than zero.")`
- B. `Trace.Assert(XYZQuantity < 0, _ "Inventory cannot be less than zero.")`
- C. `Trace.Fail(XYZQuantity >= 0, _ "Inventory cannot be less than zero.")`
- D. `Trace.WriteLineIf(XYZQuantity < 0, _ "Inventory cannot be less than zero.")`

Answer: A

Explanation:

The Assert method emits output as a message box if the condition is false. If XYZQuantity < 0 then the message box will appear and the user would be able to check the current call stack in the call stack window.

Incorrect Answers: Option B:

The Assert method emits output if the condition is false. The condition is incorrect.

Option C:

The Fail method writes output unconditionally. It cannot be used with a condition..

Option D:

The WriteLineIf method emits output if the condition is true. Though the code will continue to run, so it would be impossible to check the call stack window at this point of time.

Reference:

Visual Basic and Visual C# Concepts, Adding Trace Statements to Application Code .NET Framework Class Library, Trace Class [Visual Basic] Visual Studio, Using the Call Stack Window

Question: 96. (D)

You use Visual Studio .NET to create a Windows-based accounting application. Your application will be deployed on computers running Windows 98, Windows 2000 Professional, and Windows XP Professional.

You must ensure that your application records information about errors raised from calls to a procedure named UpdateData. To do so, you plan to implement logging features.

Which code segment should you use?

- A. `Dim oLog As New EventLog()
Dim oType As EventLogEntryType
Try
UpdateData()

Catch eEx As Exception If Not EventLog.SourceExists("AccountingApp")
Then EventLog.CreateEventSource("AccountingApp", _
"Application") End If oLog.Source = "AccountingApp" oLog.Log = "Application" oType = EventLogEntryType.Error
oLog.WriteEntry("Error details: " & _ oEx.Message, oType)
End Try`
- B. `Dim 1FH As Long Try UpdateData()
Catch oEx As Exception 1FH = FreeFile() Open logfilePath For Append As #1FH Print #1FH, oEx.Message Close #1FH
End try`
- C. `Dim oWriter As New _
IO.StreamWriter(IO.File.Open(logfilePath, _ 10.FileMode.Append)) Dim oListener As New _ TextWriterTraceListener(oWriter
Debug.Listeners.Add(oListener) Try UpdateData()
Catch oEx As Exception Debug.WriteLine(oEx.Message) oWriter.Flush() oWriter.Close() oWriter = Nothing
End Try`
- D. `Dim oWriter As New _ IO.StreamWriter(IO.File.Open(logfilePath, _
IO.FileMode.Append))
Dim oListener As New _ TextWriterTraceListener(oWriter)
Trace.Listeners.Add(oListener)
Try
UpdateData()

Catch oEx As Exception Trace.WriteLine(oEx.Message) Trace.Listeners.Clear() oWriter.Close() oWriter = Nothing
End Try`

Answer: D

Explanation:

We log trace information by using Trace Listeners. This does not require an event log on computer.

Reference:

Visual Basic and Visual C# Concepts, Creating and Initializing Trace Listeners

Incorrect Answers

A: Windows 9x clients do not have any Event log. We can't use an Event log to record information.

B: This is incorrect. No log file is opened.

C: We want to log tracing information, not debug information.

Question: 97. (D)

You use Visual Studio .NET to create a Windows Service application XYZApp. You compile a debug version and install it on your computer, which runs Windows 2000 Server. You start XYZApp from the Windows 2000 Service Control Manager. Now you need to begin debugging it within Visual Studio .NET

What should you do?

- A. Add a reference to the application within Visual Studio .NET. Add breakpoints to the code. Invoke the breakpoints by sending Stop, Pause, and Continue commands from the Service Control Manager.

- B. Select **Processes** from the **Debug** menu and attach the debugger to XYZApp.
- C. Place a breakpoint in the OnStart method of the application and then run it.
- D. Place a breakpoint in the Main procedure of the application and then run it.

Answer: B

Explanation:

To debug a service, you must start the service and then attach a debugger to the process in which it is running. We use the Process dialog box to attach to the running service.

Note:

The Processes dialog box enables you to view and manipulate programs in a Visual Studio solution. Using this dialog box, you can debug multiple programs at the same time in a single solution.

Reference:

Visual Basic and Visual C# Concepts, Debugging Windows Service Applications Visual Studio, Processes Dialog Box

Incorrect Answers

- A:** The service is run with in the context of the Services Control Manager, not within Visual Studio .NET. We cannot debug a process by adding a reference to the process and adding breakpoints.
- C:** Because the service has already been started, you cannot debug the code in the service's OnStart method.
- D:** Because the service has already been started, you cannot debug the code in the main procedure of the service.

Question: 98. (D)

You develop a Windows-based application named XYZOrders. You implement the Trace object within your application code. You will use this object to record application information, such as errors and performance data, in a log file.

You must have the ability to enable and disable Trace logging. This functionality must involve the minimum amount of administrative effort. What should you do?

- A. Create a Boolean constant in your application named #TraceLogging and set it to **False**. Each time your code uses Trace logging, use a #if...#Then statement to evaluate your #TraceLogging constant.
- B. On each computer that will host your application, create an environment variable named CustOrders.Trace. Set the environment variable to **True** when you want to enable Trace logging. Set it to **False** when you want to disable Trace logging.
- C. On each computer that will host your application, edit the shortcut used to start your application. Add /d:TRACE=True to the Target property.
- D. Use the TraceSwitch class within your code. Each time your code uses Trace logging, consult the TraceSwitch level to verify whether to log information. Change the TraceSwitch level by editing your applications .config.file.

Answer: D

Explanation:

By placing Trace Switches in your code, you can control whether tracing occurs and how extensive it is.

Reference:

Visual Basic and Visual C# Concepts, Introduction to Instrumentation and Tracing Visual Basic and Visual C# Concepts, Trace Switches

Question: 99. (D)

You use Visual Studio .NET to create a Windows-based data management application named MyApp. You implement the following code segment:

```
Dim oSwitch As New _ TraceSwitch("MySwitch", "My TraceSwitch")
Dim oWriter As New IO.StreamWriter(IO.File.Open("c:\MyApp.txt", _
    IO.FileMode.Append))
Dim oListener As New _ TextWriterTraceListener(oWriter)

    Trace.Listeners.Add(oListener). Try CustomerUpdate()
    Catch oEx As Exception
        Trace.WriteLineIf(oSwitch.TraceError, _ "Error: " &
            oEx.Message)
Finally Trace.Listeners.Clear() oWriter.Close() oWriter. =
    Nothing
End Try
```

You compile a debug version of the application and deploy it to a user's computer. The user reports errors, which are generated within the CustomerUpdate procedure.

You decide to enable logging of the error messages generated by CustomerUpdate. You want to use the minimum amount of administrative effort.

What should you do?

- A. Start the application with the following command line: /TRACE MySwitch 1.
- B. Start the application with the following command line: /d:TRACE=True.
- C. Start the application with the following command line: /XML <switch="MySwitch" value="1">
- D. Create an environment variable on the user's computer. Name the variable MySwitch and assign it a value of 1.
- E. Edit your application's config file to set the value of MySwitch to 1.

Answer: E

Explanation:

After your application has been distributed, you can still enable or disable trace output by configuring the trace switches in your application. You can change the values of the switch objects using the configuration file. In addition to specifying the name of a switch to configure, you must also specify a value for the switch. This value is an Integer. For BooleanSwitch, a value of 0 corresponds to Off, and any nonzero value corresponds to On.

Reference:

Visual Basic and Visual C# Concepts, Trace Switches Visual Basic and Visual C# Concepts, Configuring Trace Switches

Question: 100. (D)

Your project team uses Visual Studio .NET to create an accounting application. Each team member uses the Write method of both the Debug class and the Trace class to record information about application execution in the Windows 2000 event log.

You are performing integration testing for the application. You need to ensure that only one entry is added to the event log each time a call is made to the Write method of either the Debug class or the Trace class.

What are two possible code segments for you to use? (Each correct answer presents a complete solution. Choose two)

- A. Dim myTraceListener As New _

EventLogTraceListener("myEventLogSource") Trace.Listeners.Add(myTraceListener)

- B. Dim myDebugListener As New _
EventLogTraceListener("myEventLogSource"). Debug.Listeners.Add(myDebugListener)
- C. Dim myTraceListener As New _
EventLogTraceListener("myEventLogSource") Debug.Listeners.Add(myTraceListener) Trace.Listeners.Add(myTraceListener)
- D. Dim myDebugListener As New _ EventLogTraceListener("myEventLogSource")
Dim myTraceListener As New _
EventLogTraceListener("myEventLogSource") Debug.Listeners.Add(myDebugListener) Trace.Listeners.Add(myTraceListener)

Answer: A & B

Explanation:

An EventLogTraceListener redirects output to an event log. Debug and trace share the same Listeners collection, so if you add a listener object to a Debug.Listeners collection in your application, it gets added to the Trace.Listeners collection as well, and vice versa.

Reference:

Visual Basic and Visual C# Concepts, Trace Listeners Visual Basic and Visual C# Concepts, Creating and Initializing Trace Listeners

Incorrect Answers

C: Add a listener to both the Debug.Listeners collection and the Trace.Listeners collection the listener would receive duplicate messages.

D: If we create a separate listener for trace messages and debug messages we would get duplicate messages

Question: 101. (D)

You are maintaining a Visual Studio .NET application that was created by another developer. The application functions as expected for several months. Then users report that it sometimes calculates tax amounts incorrectly.

An examination of the source code leads you to suspect that the errors are caused by a function named CalculateXYZSales. To test your hypothesis, you place a breakpoint on the following line of code:

```
decTax = CalculateXYZSales(decRate, decSaleAmount)
```

However, when you run the application to create a test invoice, the breakpoint is not invoked.

How should you correct this problem?

- A. Select Enable All Breakpoints from the Debug menu.
- B. Select Configuration Manager from the Build menu. Set the Activate Solution Configuration option to Debug. Set the Configuration property of the project to Debug.
- C. Select Options from the Tools menu and then select the General object from the Debugging folder. Choose the option In break mode, only stop execution of the current process.
- D. Select Exceptions from the Debug menu. Under the heading If the exception is not handles, select Break into the Debugger.

Answer: B

Explanation:

If the Active Solution Configuration is set to Release, no Breakpoints would apply. This could cause the behavior described in this scenario. If we should change this setting to Debug the breakpoints would be applied.

Reference:

Visual Studio, Configuration Manager Dialog Box Visual Studio, Exceptions Dialog Box

Incorrect Answers

A: There is no Enable All Breakpoints command on the Debug menu.

C: There is no option In break mode, only stop execution of the current process, or any other debugging configuration, in the General options.

D: We are not interested in exceptions. We just want to breakpoints to apply.

Question: 102. (D)

You company XYZ assigns you to modify a Visual Studio .NET application that was created by a former colleague. However, when you try to build the application, you discover several syntax errors.

You need to correct the syntax errors and compile a debug version of the code so the application can be tested. Before compiling, you want to locate each syntax error as quickly as possible.

What should you do?

A. Select each error listed in the Task List window.

B. Open the Application event log from the Visual Studio .NET Server Explorer window. Select each error listed.

C. Run the application in Debug mode. Each time an error is encountered, correct it and continue debugging the application.

D. Select Build Solution from the Build menu. When the build fails, correct each error listed in the Output window.

E. Select Build Comment Web Pages from the Tools menu. Select each function listed in the report that is generated.

Answer: A

Explanation:

The task list window contains information which helps you to organize and manage the work of building your application. Among other things it will include each syntax error of the application.

Reference:

Visual Studio, Task List Window Visual Studio, Build Comment Web Pages Dialog Box

Incorrect Answers

B: Event logs would not contain information on syntactical errors.

C: Syntax errors are corrected in Debug mode.

D: The errors are listed in the Task List windows. The text in the Output windows is more extensive, and the syntax errors are harder to spot.

E: Build Comment Web Pages would not list the syntax errors. It allows you to create a series of .htm pages that display the code structure within projects and solutions, objects and interfaces defined in a project, and members. The .htm pages also display information you have included in your code using the code comment syntax.

Question: 103. (D)

You use Visual Studio .NET to create a Windows-based application. The application includes a form named XYZProcedures (EXP). EXP allows users to enter very lengthy text into a database. When users click the Print button located on EXP, this text must be printed by the default printer.

You implement the printing functionality by using the native .NET System Class Libraries with all default settings.

Users report that only the first page of the text is being printed. How should you correct this problem?.

- A. In the BeginPrint event, set the HasMorePages property of the PrintEventArgs object to True.
- B. In the EndPrint event, set the HasMorePages property of the PrintEventArgs object to True.
- C. In the PrintPage event, set the HasMorePages property of the PrintPageEventArgs object to True.
- D. In the QueryPageSettings event, set the HasMorePages property of the QueryPageSettingEventArgs object to True.

Answer: C

Explanation:

PrintDocument.PrintPage Event occurs when the output to print for the current page is needed. This event has the HasMorePages property which gets or sets a value indicating whether an additional page should be printed.

Reference:

.NET Framework Class Library, PrintDocument Class [Visual Basic] .NET Framework Class Library, PrintDocument.PrintPage Event [Visual Basic]

Question: 104. (D)

You are maintaining a Visual Studio .Net application that was developed by a colleague at XYZ inc.

The application calculates interest and penalties for financial transactions. All variables that contain financial data are defined as type Double.

When users enter financial data, the application periodically fails during execution. Failure occurs in response to a variety of actions. The application returns the following error message: "Arithmetic operation resulted in an overflow"

You need to identify as many potential exceptions as possible in the application code.

What should you do?

- A. Set Option Explicit to On.
- B. Set Option Explicit to Off.
- C. Set Option Strict to On.
- D. Set Option Strict to Off.
- E. Set Option Compare to Binary.
- F. Set Option Compare to Text.

Answer: C

Explanation:

The Options Strict statement concerns which conversion are allowed. Option Strict ON disallows any data type conversions in which data loss would occur and any conversion between numeric types and strings. In short it help to identify potential arithmetic exceptions.

Reference:

Visual Basic Language Reference, Option Strict Statement Visual Basic Compiler Options, /optionexplicit Visual Basic Language Reference, Option Compare Statement

Incorrect Answers

A: The /optionexplicit causes the compiler to report errors if variables are not declared prior to use. It would not help finding potential exceptions however.

B: Disabling variable declaration checking will not help finding exceptions.

D: Setting Options Strict to Off disables type conversion checks. We should enable these checks. **E, F:** The Option Compare statement is used at file level to declare the default comparison method to use when string data is compared. This setting would not help finding exceptions.

Question: 105. (D)

You use Visual Studio .NET to develop a Windows-based application named Advocate Resource Assistant (ARA). ARA contains a class named Client. The client class is defined by the following code segment:

```
Namespace Fabrikam.Buslayer Public Class Client
```

```
Public Function GetPhone(clientID As Integer) As String 'More code goes here. End Function
```

```
'Other functions go here.
```

```
End Class End NameSpace
```

The Client class is invoked from ARA by using the following code segment:

```
Public Class ClientForm.  
Inherits System.Windows.Forms.Form  
Private Sub SetPhoneNumber(ByVal PostalCode As String)  
Dim client as New Client()  
TextBox1.Text = client.GetPhone(postalCode)  
End Sub End Class
```

When you try to build your project, you receive the following error message: "Type 'Client' is not defined."

What are two possible ways to correct this problem? (Each correct answer presents a complete solution. Choose two.)

- A. Fully qualify the Client class with the Fabrikam.BusLayer namespace.
- B. Fully qualify the Client class with ARA namespace.
- C. Import the Fabrikam.BusLayer namespace in the ClientForm class.
- D. Inherit the Fabrikam.BusLayer namespace in the ClientForm class.
- E. Declare the client object variable by using the WithEvents keyword.
- F. Declare the client object variable by using the Implements keyword.

Answer: A & C

Explanation:

A: We could use a fully qualified name; Fabrikam.Buslayer.Client

C: We could import the Fabrikam.BusLayer namespace by creating an alias: Imports client = Fabrikam.Buslayer.Client

Reference:

Visual Basic Language Concepts, Namespaces

Question: 106. (E)

As a programmer at XYZ inc, you use Visual Studio .NET to create several applications that will be deployed commercially over the Internet. You must ensure that customers can verify the authenticity of your software.

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

- A. Sign your portable executables by using Signcode.exe.
- B. Generate an X.509 certificate by using Makecert.exe.
- C. Purchase an X.509 certificate from a certificate authority.
- D. Purchase a Software Publisher Certificate from a certificate authority.
- E. Convert your certificate to a Software Publisher Certificate by using Cert2spc.exe.

Answer: A & D

Explanation:

D: We must use a Software Publisher Certificate from a certificate authority.

A: We then use this certificate to sign the portable executables with the Signcode.exe utility.

Reference:

Visual Basic and Visual C# Concepts, Code Security and Signing in Components

.NET Framework Tools, File Signing Tool (Signcode.exe) .NET Framework Tools, Certificate Creation Tool (Makecert.exe) Windows Storage System Technical Articles, Microsoft Windows 2000 Public Key Infrastructure .NET Framework Tools, Software Publisher Certificate Test Tool (Cert2spc.exe)

Incorrect Answers

B: The Certificate Creation tool generates X.509 certificates for testing purposes only.

C: We should use a Software Publisher Certificate, not a X.509 certificate.

E: The Software Publisher Certificate Test tool creates a Software Publisher's Certificate (SPC) from one or more X.509 certificates. Cert2spc.exe is for test purposes only.

Question: 107. (E)

You create a user control named ScrollControl, which you plan to sell to developers. You want to ensure that ScrollControl can be used only by developers who purchase a license to use it.

You decide to use a license provider implemented by the LicFileLicenseProvider class. Now you need to add code to ScrollControl to test for a valid control license.

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

- A. <LicenseProvider(GetType(LicFileLicenseProvider))>
- B. <LicenseProvider(GetType(ScrollControl))>
- C. In the Load event handler for ScrollControl, place the following code segment: Try
LicenseManager.Validate(GetType(ScrollControl)) Catch ex As Exception 'Insert code to disallow use. End Try
- D. In the Load event handler for ScrollControl, place the following code
segment: Try Dim ControlLicense As License ControlLicense = _
LicenseManager.Validate(GetType(ScrollControl), Me) Catch ex As Exception 'Insert code to disallow use. End Try
- E. In the Load event handler for ScrollControl, place the following code segment:
Try Dim bLicensed As Boolean bLicensed = _
LicenseManager.IsValid(GetType(ScrollControl)) Catch ex As Exception 'Insert code to disallow use. End Try
- F. In the Load event handler for ScrollControl, place the following code segment:
Try Dim bLicensed As Boolean Dim ControlLicense As License bLicensed = _
LicenseManager.IsValid(GetType(ScrollControl), Me, _ ControlLicense) Catch ex As Exception
'Insert code to disallow use. End Try

Answer: A & D

Explanation:

To enable licensing for your component

- 1 Apply a LicenseProviderAttribute to the LicFileLicenseProvider class. This is A).
- 2 Call LicenseManager.Validate or LicenseManager.IsValid in the constructor. This is D).

A: When you create a component that you want to license, you must specify the LicenseProvider by marking the component with a LicenseProviderAttribute. This is accomplished by: <LicenseProvider(GetType(LicFileLicenseProvider))>

D: LicenseManager.Validate produces a license. The correct code to handle this is: Dim ControlLicense As License ControlLicense = LicenseManager.Validate(GetType(ScrollControl), Me)

Reference:

.NET Framework Developer's Guide, Licensing Components and Controls [Visual Basic] .NET Framework Class Library, LicenseProviderAttribute Class [Visual Basic]

Incorrect Answers

B: The LicFileLicenseProvider class, not ScrollControl class must be used.

C: The result of LicenseManager.Validate must be caught in a license variable. **E, F:** The result of LicenseManager.Validate must be caught in a license variable, not a Boolean variable

Question: 108. (E)

You use Visual Studio .NET to create a Windows-based application called XYZApp, that will be distributed to your customers. You add a setup project to your solution to create a distribution package.

You deploy the distribution package on a test computer. However, you discover that the distribution package does not create a shortcut to your application on the Programs menu of the test computer. You need to modify your setup project to ensure that this shortcut will be available on your customers Programs menus.

What should you do?

- A. Navigate to the User's Programs Menu folder in the **File System on Target Machine** hierarchy. Add the primary output from your application.
- B. Navigate to the Application Folder folder in the **File System on Target Machine** hierarchy. Create a shortcut to your application and move the shortcut to the User's Programs Menu folder in the same hierarchy.
- C. Navigate to the Install folder in the **Customer Actions** hierarchy. Create a custom action that adds the primary output from your application to the User's Programs Menu folder.
- D. Navigate to the Install folder in the **Custom Actions** hierarchy. Create a custom action that adds a shortcut to your application's executable file to the User's Programs Menu folder.

Answer: B

Explanation:

We use the File System Editor to create a shortcut to the Application in the Programs Menu folder in the File System on Target Machine **hierarchy**. **Note:** The File System Editor is used to add project outputs and other files to a deployment project, to specify the locations where files will be installed on a target computer, and to create shortcuts on a target computer.

Reference:

Incorrect Answers

A: We want to make a Shortcut, not to move the .exe file into the Start Menu.. **C, D:** The Custom Actions Editor is used to specify custom actions to be run during installation on a target computer. It is not used to create shortcuts for the Application.

Question: 109. (E)

You develop an application, XYZRemote, that enables mobile salespeople to look up contact information in a database. The salespeople use portable computers running Windows XP Professional.

Because of the large size of the database, you want to create a distribution package to distribute your application and the database on a CD-ROM. However, you discover that the total size of the distribution package exceeds the capacity of a 650-MB CD-ROM. You want to reduce the size of the distribution package so it will fit on a single CD-ROM.

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

- A. Exclude the .NET Framework dependency from your distribution package.
- B. Use a third-party compression utility to compress the .NET Framework dependency files.
- C. Set the package files option of your setup project to **In cabinet file(s)** and set the maximum CAB file size to 650 MB.
- D. Set the Compression property of your setup project to **Optimized for size**.
- E. Set the Bootstrapper property of your setup project to **None**.

Answer: A & D

Explanation:

A: The Windows XP operating system includes the .NET Framework already. We can safely exclude it from the distribution package. The size of **Note:** The .NET Framework merge module is automatically added as a dependency for any application built with the .NET Framework. You should exclude the merge module only if you are sure that the application will only be installed where the .NET Framework run-time files are already installed.

D: If you choose Optimized For Size, the setup project will be the smallest possible size, but might require more time to install.

Reference:

70-306/70-316 Training kit, Deploying your Application, Bootstrapper, Compression, Page 475

Visual Studio, Build, Configuration Settings, Deployment Project Properties Dialog Box Visual Studio, Walkthrough: Reducing the Size of an Installer by Excluding Merge Modules

Incorrect Answers

B: Third party compression utilities are not used to compress Visual Studio .NET projects.

C: A maximum cab size of 650MB would enable spanning the application to several CDs. However, we want the application to fit on a single CD.

E: The Bootstrapper property specifies whether a bootstrapper (bootstrapping application) will be included in an installer. A bootstrapper includes the files needed to install Microsoft Windows Installer 1.5 on the target computer if it is not already installed. Windows installer 1.5 is already included in Windows XP but is required for earlier operating systems. Setting the Bootstrapper property to None would reduce the project size. However, not as much as A) or D).

Question: 110. (E)

You use Visual Studio .NET to develop an application for users the intranet of your company XYZ.

All client computers use Internet Explorer as their Web browser. You plan to create a setup package to distribute your application.

The setup package must fulfill the following requirements:

- It is placed in a network folder that is accessible to users.
- It is accessible through a link on your company's intranet.
- It includes an uninstaller for the application.

Which type of project should you create?

- A. CAB project.
- B. merge module project.
- C. setup project.
- D. Web setup project.

Answer: C

Explanation:

You should use the network installation (type of setup project).

Note:

Setup projects allow you to create installers in order to distribute an application. The resulting Windows Installer (.msi) file contains the application, any dependent files, information about the application such as registry entries, and instructions for installation.

Reference:

Visual Studio, Deployment of a Web Setup Project Visual Studio, CAB File Projects Visual Studio, Adding Merge Modules to a Deployment Project Visual Studio, Setup Projects

Incorrect Answers

A: CAB projects allow you to create a .cab file to package ActiveX controls, not applications however, that can be downloaded from a Web server to a Web browser.

B: You don't install merge module projects with Internet Explorer. **Note:** Merge modules (.msm files) allow you to share components between multiple deployment projects.

D: Purpose of the Web setup project is for installing Web applications (ASP.NET applications). In case of Web applications, setup package don't have to be accessible to users in network folder (you install Web application on a Web server, and users use it without further installation).

Question: 111. (E)

XYZ standardizes on the .NET Framework as its software development platform. Subsequently, virus attacks cause XYZ to prohibit the execution of any applications downloaded from the Internet.

You must ensure that all client computers on your intranet can execute all .NET applications originating from XYZ. You must also ensure that the execution of .NET applications downloaded from the Internet is prohibited. You must expend the minimum amount of administrative effort to achieve your goal.

Which policy should you modify?

- A. Application Domain
- B. Enterprise
- C. Machine
- D. User

Answer: B

Explanation:

The Enterprise Policy applies to all managed code in an enterprise setting, where an enterprise configuration file distributed.

Note:

Four security policy levels are provided by the .Net Framework to compute the permission grant of an assembly or application domain..

Reference:

.NET Framework Developer's Guide, Security Policy Levels

Incorrect Answers

A: An application domain only applies to one specific application.

C: The Machine Policy only applies to the local computer.

D: The User Policy only applies to the current user.

Question: 112. (E)

You develop an application XYZApp that will be sold commercially. You create a Visual Studio .NET setup project to distribute the application. You must ensure that each user accepts your license agreement before installation occurs.

What should you do?

- A. Add a launch condition to your setup project. Add your license agreement to the Message property of the launch condition.
- B. Open the user interface designer for your setup project.. Select the **Welcome** dialog box from the Start object and add your license agreement to the CopyrightWarning property.
- C. Save you license agreement in the Rich Text Format and add the file to your setup project. Open the property pages for the setup project and set the Certificate to the name of your Rich Text file.
- D. Save your license agreement in Rich Text Format and add the file to your setup project. Open the user interface designer for the setup object. From the Start object, select the **License Agreement** dialog box and set the LicenseFile property to the name of your Rich Text file.

Answer: D

Explanation:

First we save the License agreement text in a RFT file and add it to the project. Then we use the User Interface Editor/Designer to configure the License Agreement dialog box.

Note:

Visual Studio .NET provides a number of predefined user interface dialog boxes that can be displayed during installation to present or gather information. The dialog boxes to be displayed are specified in the User Interface Editor.

Reference:

Visual Studio. Deployment and the Run-Time User Interface

Incorrect Answers

A: Deployment dialog boxes are not configured with launch conditions.

B: The **Welcome** dialog box is not used for license agreements. Furthermore, we must create a RFT file containing the licensing

agreement text.

C: The User Interface Editor must be used. We cannot configure the dialog box with the property pages of the project.

Question: 113. (E)

You use Visual Studio .NET to develop a component named XYZComponent. You plan to develop several client applications that use XYZComponent.

You need to deploy XYZComponent with each of these applications. You will create a distribution package to be included with each application.

Which type of project should you create?

- A. CAB project.
- B. merge module project.
- C. setup project.
- D. Web setup project.

Answer: B

Explanation

Merge Module projects allow you to create reusable setup components. They create a merge module (.msm) file that includes all files, resources, registry entries, and setup logic for your component. The resulting .msm file can then be merged into other deployment projects, insuring consistent installation of your component across multiple applications.

Reference:

Visual Studio, Merge Module Projects Visual Studio, Creating or Adding a Merge Module Project

Question: 114. (E)

You use Visual Studio .NET to create an application named XYZClient. Another developer in your company creates a component named XYZComponent. Your application uses namespaces exposed by XYZComponent.

You must deploy both XYZClient and XYZComponent to several computers in your company's accounting department. You must also ensure that XYZComponent can be used by future client applications.

What are three possible ways to achieve your goal? (Each correct answer presents a complete solution. Choose three)

- A. Deploy XYZClient and XYZComponent to a single folder on each client computer. Each time a new client application is developed, place the new application in its own folder and copy XYZComponent to the new folder.
- B. Deploy XYZClient and XYZComponent to a single folder on each client computer.. Each time a new client application is developed, place the new application in its own folder. Edit XYZClient.exe.config and add a privatePath tag that points to the folder where XYZComponent is located.
- C. Deploy XYZClient and XYZComponent to separate folders on each client computer. In each client application that will use XYZComponent, add the following code segment: using XYZComponent;
- D. Deploy XYZClient and XYZComponent to separate folders on each client computer. Each time a new client application is developed, select **Add Reference** from the **Tools** menu and add a reference to XYZComponent.
- E. Deploy XYZClient and XYZComponent to separate folders on each client computer. Register XYZComponent on each client computer by using the RegSvr32 utility.
- F. Deploy XYZClient and XYZComponent to separate folders on each client computer. Add XYZComponent to the global assembly cache.

Answer: A, B, F

Explanation:

A: XCOPY deployment of the CompanyComponent, we simply copy the component to the deployment folder of every application that requires the use of the components, enables the deployed application to use the component.

B: This would give the future client applications access to CompanyComponent.

F: If you intend to share an assembly among several applications, you can install it into the global assembly cache.

Reference:

70-306/70-316 Training kit, Accessing .NET and COM Type Libraries, Pages 386-387 .NET Framework Developer's Guide, Working with Assemblies and the Global Assembly Cache C# Programmer's Reference, using Directive

Incorrect Answers

C: The using keyword has two major uses: using Directive Creates an alias for a namespace. using Statement Defines a scope at the end of which an object will be disposed. However, this would not make the component accessible.

D: Adding references does not provide access to library in runtime (FileNotFoundException exception).

E: RegSrv32 was used in before the introduction of Visual Studio .NET to register .dll file. It is no longer required..:

Question: 115. (E)

You use Visual Studio .NET to create an application XYZTestEngine that will be deployed to several client computers. You plan to create a setup package to distribute XYZTestEngine. Because of licensing restrictions, you must ensure that the setup package can be installed only on computers that have a particular registry key. What should you do?

A. Add a registry key to the setup project. Set the Transitive property of your key to **True**.

B. From the Properties window, set the private key file option to the registry key.

C. From the Launch Conditions window, add a search for the registry key. Add a launch condition to evaluate the search results.

D. Open the setup project source code in Visual Studio .NET. Add code to search for the registry key and to abort the setup of the registry key does not exist on the client computer. Recompile setup1.exe and include it with your setup package.

Answer: C**Explanation:**

The Launch Conditions editor (windows) is used to define conditions for the installations. The condition can be used in conjunction with a file, registry, or component search to terminate installation if a specified item is not found.

Reference:

Visual Studio, Properties for the Launch Conditions Editor Visual Studio, Transitive Property Visual Studio, Condition Property

Incorrect Answers

A: The Transitive property cannot be used to stop the installation process if a registry key is missing. It determines whether the installer will reevaluate the Condition property for a selected folder, file, registry key, or registry value when installing or reinstalling on a target computer.

B: Does not apply.

D: This is not way to do it.

Question: 116. (E)

You use Visual Studio .NET to create several Windows-based applications. All use a common class library assembly named XYZCustomers. You deploy the application to client computers on your company intranet.

Later, you modify XYZCustomers. Any application that uses version 1.0.0.0 must now use version 2.0.0.0.

What should you do?

- A. Modify the machine configuration file on your client computers.
- B. Modify the application configuration file for Customers.
- C. Modify the Publisher Policy file containing a reference to Customers.
- D. Modify the reference patch for Customers.

Answer: C

Explanation:

When an assembly vendor releases a new version of an assembly, the vendor can include a publisher policy so applications that use the old version now use the new version.

Reference:

.NET Framework General Reference, <publisherPolicy> Element

Question: 117. (E)

You use Visual Studio .NET to create a component XYZShared that will be shared by two client applications. Eventually, you plan to deploy new version of XYZShared. However, not all of the new versions will be compatible with both client applications. When you deploy XYZShared and the client applications, you must ensure that you can upgrade the XYZShared for a single client application. You must also minimize the need for configuration changes when you deploy new version of the component.

What are two possible ways to achieve your goal? (Each correct answer presents a complete solution. Choose two)

- A. Deploy each client application to its own folder. Deploy the Shared to its own folder. Register the Shared by using RegSvr32 with the /s option.
- B. Deploy each client application to its own folder. Deploy a separate copy of the Shared to each client application folder. When you deploy a new version of the Shared, replace the older version only if the new version remains compatible with the client application in the same folder.
- C. Compile the client applications with reference to the shared. Deploy both client applications and the Shared to a single folder. When you deploy a new version of the Shared, increment its version number.
- D. Create a strong name of the Shared and specify a version number. Compile each client application and bind it to the Shared. Deploy the Shared to the global assembly cache on the client computer. Deploy each client application to its own folder. When you deploy a new version of the Shared, increment its version number.

Answer: B & D

Explanation:

B: We keep two separate copies of the shared component. And we only replace the shared copy of the component if compatibility is still maintained.

D: You can install multiple versions of the same assembly to the Global Assembly Cache, and applications can locate and use the appropriate version.

References:

70-306/70-316 Training kit, Understanding Private and Shared Assemblies, Pages 433-434

Incorrect Answers

A: RegSrv32 was used in Visual Basic 6.0 and Visual C++ 6.0 and earlier. It is no longer used in Visual Studio .Net.

C: The shared component might be compatible with both client applications. We should use the global assembly cache, not put CompanyShared and the client applications in the same folder.

Question: 118. (E)

Your development team is creating a Windows-based application for the XYZ company. The application asynchronously calls the ProcessLoan method of an XML Web service. The XML Web service will notify your code when it finished executing ProcessLoan.

You must ensure that your code can continue processing while waiting for a response from the XML Web service. Your code must establish when ProcessLoan finished executing.

What should your application do?

- A. Use the WaitHandle.WaitAny method of the IAsyncResult.AsyncWaitHandle object. Examine the value of IAsyncResult.IsCompleted to see if ProcessLoan is finished executing.
- B. Use the WaitHandle.WaitAll method of the IAsyncResult.AsyncWaitHandle object. Examine the value of IAsyncResult.IsCompleted to see if ProcessLoan is finished executing.
- C. Supply a callback delegate to the BeginProcessLoan method of the XML Web service. After the XML Web service returns its response, a thread will invoke the callback from the threadpool.
- D. Supply a callback delegate to the EndProcessLoan method of the XML Web service. After the XML Web service returns its response, a thread will invoke the callback from the threadpool.

Answer: C

Explanation:

Calling an XML Web service asynchronously is a two-step operation. The first step, calling the Begin method, initiates the XML Web service call. The second step, calling the End method, completes the XML Web service call and returns the XML Web service response.

There are different methods to determine when the asynchronous XML Web service call has completed. The preferred and most efficient method is to supply a callback delegate to the Begin method.

Reference:

Visual Basic and Visual C# Concepts, Accessing an XML Web Service Asynchronously in Managed Code

Incorrect Answers A, B: It is possible to use IAsyncResult.AsyncWaitHandle object to determine when the asynchronous XML Web service call has completed. This is less efficient though.

D: The callback delegate should be supplied to the Begin method, not the End method.

Question: 119. (E)

You develop a Windows-based application named XYZ3 by using Visual Studio .NET. XYZ3 consumes an XML Web service named MortgageRate and exposes a method named GetCurrentRate. XYZ3 uses GetCurrentRate to obtain the current mortgage interest rate. Six months after you deploy XYZ3, users begin reporting errors. You discover that MortgageRate has been modified. GetCurrentRate now requires you to pass a postal code before returning the current mortgage interest rate. You must ensure that XYZ3 consumes the most recent version of MortgageRate. You must achieve this goal in the most direct way possible. What should you do?

- A. Use Disco.exe to generate a new proxy class for MortgageRate.
- B. Modify the XYZ3 code to pass the postal code to GetCurrentRate.
- C. Use the Update Web Reference menu item to update the reference to MortgageRate in XYZ3.
- D. Use the Add Reference dialog box to recreate the reference to MortgageRate in XYZ3.
- E. Remove the reference to MortgageRate in XYZ3. Use the Add Web Reference dialog box to create the reference.

Answer: C

Explanation:

If your application contains a Web reference to an XML Web service that has been recently modified on the server, you may need to update the reference in your project.

To update a project Web reference

- 1 In Solution Explorer, access your project's Web References folder and select the node for the Web reference you want to update.
- 2 Right-click the reference and click Update Web Reference.

Reference:

Visual Basic and Visual C# Concepts, Managing Project Web References

Question: 120. (E)

You use Visual Studio .NET to create an application that uses an assembly. The assembly will reside on the client computer when the application is installed. You must ensure that any future applications installed on the same computer can access the assembly. Which two actions should you take? (Each correct answer presents part of the solution. Choose two)

- A. Use XCOPY to install the assembly in the global assembly cache.
- B. Use XCOPY to install the assembly in the Windows\Assembly folder.
- C. Create a strong name for the assembly.
- D. Recompile the assembly by using the Native Image Generator (Ngen.exe).
- E. Modify the application configuration file to include the assembly.
- F. Use a deployment project to install the assembly in the global assembly cache.
- G. Use a deployment project to install the assembly in the Windows\System32 folder.

Answer: C & F

Explanation:

The global assembly cache stores assemblies specifically designated to be shared by several applications on the computer.

C: An assembly must have a strong name to be installed in the global assembly cache.

F: There are two ways to install an assembly into the global assembly cache:

Using Microsoft Windows Installer 2.0. This could be achieved by a deployment project.

Using the Global Assembly Cache tool (Gacutil.exe). This is not an option here.

Reference:

.NET Framework Developer's Guide, Working with Assemblies and the Global Assembly Cache .NET Framework Developer's Guide, Installing an Assembly into the Global Assembly Cache

Question: 121. (E)

You use Visual .NET to develop a Windows-based application whose project name is XYZMgmt.

You create an application configuration file that will be installed on the client computer along with XYZMgmt.

You must ensure that the settings in the application configuration file are applied when XYZMgmt is executed.

What should you do?

- A. Name the configuration file XYZMgmt.exe.config and copy it to the Windows\System32 folder.

- B. Name the configuration file XYZMgmt.config and copy it to the Windows\System32 folder.
- C. Name the configuration file XYZMgmt.exe.config and copy it to the application folder.
- D. Name the configuration file XYZMgmt.config and copy it to the application folder.
- E. Name the configuration file XYZMgmt.exe.config and copy it to the global assembly cache.

Answer: C

Explanation:

The configuration file for an application hosted by the executable host is in the same directory as the application. The name of the configuration file is the name of the application with a .config extension.

In this scenario the configuration file should named XYZMgmt.exe.config and be placed in the application folder.

Question: 122. (F)

You use Visual Studio .NET to create a Windows-based application named XYZAccess. XYZAccess will be used by five customer service representatives to access a central database. All five representatives use client computers that are connected to the company intranet. All client computers have Windows XP Professional and the .NET Framework installed.

When you distribute XYZAccess, you must ensure that it uses the smallest possible hard disk space on the client computers.

What should you do?

- A. Copy your application to each client computer. Create a shortcut to your application on the desktop of each client computer.
- B. Copy your application to a shared folder on your company intranet. Create a shortcut to your application on the desktop of each client computer.
- C. Create a distribution package by using the Visual Studio .NET Setup Wizard. Exclude the dependency for the .NET Framework. Install the distribution package on each client computer.
- D. Create a distribution package by using the Visual Studio .NET Setup Wizard. Set the distribution package's Compression property to Optimized for size. Install the distribution package on each client computer.

Answer: A

Explanation:

The .NET Framework is required on each system that runs Visual Basic .NET application. Installed the .NET Framework is 30 MB. Windows XP already has the .NET Framework included in the operating systems, so we don't have to distribute it. We can simply copy the application to each client computer and manually create a shortcut to the application.

Reference:

MSDN Library, Redistributing the .NET Framework .NET Framework Developer's Guide, Distributing the Common Language Runtime

Incorrect Answers

B: Running the application over the network simultaneously at 5 clients is not guaranteed to work.

C: The .NET Framework is not included in distribution packages made by Visual Studio .NET. There is no need to remove it.

D: This compression is only for the installation files. It would still require the same amount of disk space on the client computers.

Question: 123. (F)

You use Visual Studio .NET to create an application that will be distributed to employees within your company XYZ Inc. You create and deploy a distribution package to test a computer running Windows 2000 Professional.

Later you discover that your name is listed as the support contact for your application by the Add/Remove Programs option of Control Panel. You need to change the support contact to the name of your Help desk administrator.

Which property of the setup project should you change?

- A. Author
- B. Comments
- C. Manufacturer
- D. SupportPhone

Answer: A

Explanation:

The Author property specifies the name of the author of an application or component. Once the application is installed, the property is also displayed in the Contact field of the Support Info dialog box.

Reference:

Visual Studio, Deployment Properties Visual Studio, Author Property Visual Studio, Manufacturer Property

Incorrect Answers

B: There is no Deployment property called comments.

C: The Manufacturer property specifies the name of the manufacturer of an application or component, usually the name of the company that developed it. Once the application is installed, the Manufacturer property is displayed in the Publisher field of the Support Info dialog box.

D: We are not interested in supplying a telephone number-

Question: 124. (F)

You develop a Windows-based application by using Visual Studio .NET. The application included numerous method calls at startup. After optimizing your application code, you test the application on a variety of client computers. However, the startup time is too slow.

You must ensure that your application starts as quickly as possible the first time it runs.

What should you do?

- A. Precompile your application by using the Native Image Generator (Ngen.exe). Install the precompiled application on the client computers.
- B. Install your application on the client computers. Precompile your application by using the Native Image Generator (Ngen.exe).
- C. Precompile your application by using the JIT compiler. Install the precompiled application on the client computers.
- D. Install your application on the client computers. Precompile your application by using the JIT compiler.

Answer: B Explanation:

The Native Image Generator creates a native image from a managed assembly and installs it into the native image cache on the local computer. Running Ngen.exe on an assembly allows the assembly to load and execute faster, because it restores code and data structures from the native image cache rather than generating them dynamically.

The native image contains processor-specific machine code and in this scenario a variety of client computers are used. We must therefore use the Ngen.exe utility at the client computers after the installation, not at the Development computer.

Reference:

Incorrect Answers

A: The Native Image produced by Ngen.exe is machine-specific and in this scenario a variety of client computers are used. We cannot use the a single Native Image from once computer on all the other computers.. **C, D:** JIT (just-in-time) compilation occurs at run-time, and cannot be precompiled. **Note:** When you compile a .NET application, it is not compiled to binary machine code; rather, it is converted to IL, which is a low-level set of instructions understood by the common language run time. When execution starts, the first bit of code that needs to be executed is loaded into memory and compiled into native binary code from IL by the common language run time's Just-In-Time (JIT) compiler.

Question: 125. (G)

You Microsoft SQL Server database XYZ Internal is installed to use integrated security. You are designing a Windows Forms application that will run on your company intranet to access the database.

Your application must fulfill the following requirements:

- Only authorized users must be able to access data in the database.
- Ongoing security administration must be managed by the network administrator.
- Users should supply logon information only once.

What should you do?

- A. Ask the SQL Server database administrator to create a user ID for your application and to assign appropriate database permissions. Use this information to dynamically build your connection string.
- B. Ask the network administrator to create a user ID for your application. Ask the SQL Server database administrator to assign appropriate database permissions for the user ID. Use this information to dynamically build your connection string.
- C. Ask the network administrator to add users of your application to a designated Windows domain group. Ask the SQL Server database administrator to assign appropriate database permissions for this group. Use this information to dynamically build your connection string.
- D. Create a logon form for your application and obtain the user name and password of everyone who runs it. Use this information to dynamically build your connection string.

Answer: C

Question: 126. (G)

You develop a Windows-based application by using Visual Studio .NET. You use XYZ's intranet to deploy the application to client computers. You use the security configuration of the .NET Framework to configure security for you application at the enterprise policy level.

Virus attacks cause the IT manager at XYZ to tighten security at the machine level. Users report that they can no longer execute your application.

How should you correct this problem?

- A. Include the LevelFinal attribute in the intranet code group policy at the enterprise level by using the Permission View tool (Permview.exe).
- B. Include the Exclusive attribute in the intranet code group policy at the enterprise level by using the Permission View tool (Permview.exe).
- C. Include the LevelFinal attribute in the intranet code group policy at the enterprise level by using the Code Access Security Policy tool (Caspol.exe).
- D. Include the Exclusive attributes in the intranet code group policy at the enterprise level by using the Code Access Security Policy tool (Caspol.exe).

Answer: C

Explanation:

The Code Access Security Policy tool (Caspol.exe) enables users and administrators to modify security policy for the machine policy level, the user policy level, and the enterprise policy level. If we apply the **LevelFinal** attribute at the enterprise level, any code group at the machine level will not be evaluated even if a machine level administrator has made changes.

Note: When **LevelFinal** is set to on, indicates that no policy level below the level in which the added or modified code group occurs is considered. This option is typically used at the machine policy level. For example, if you set this flag for a code group at the machine level and some code matches this code group's membership condition, Caspol.exe does not calculate or apply the user level policy for this code.

Note: Reference:

.NET Framework Tools, Code Access Security Policy Tool (Caspol.exe) Security Policy Best Practices,
<http://www.gotdotnet.com/team/clr/SecurityPolicyBestPractices.htm> .NET Framework Tools, Permissions
View Tool (Permview.exe)

Incorrect Answers A, B: The Permissions View tool is used to view, not to configure, the minimal, optional, and refused permission sets requested by an assembly.

D: When **exclusive** is set to on, it indicates that only the permission set associated with the code group you are adding or modifying is considered when some code fits the membership condition of the code group.

Question: 127. (G)

You use Visual Studio .NET to develop a Windows-based application. You implement the security classes of the .NET Framework. As users interact with your application, role-based validation will frequently be performed. You must ensure that only validated Windows NT or Windows 2000 domain users are permitted to access your application.

You add the appropriate Imports statements for the System.Security.Principal namespace and the System.Threading namespace.

Which additional code segment should you use?

- A. AppDomain.CurrentDomain.SetPrincipalPolicy(_ PrincipalPolicy.WindowsPrincipal) Dim principal As WindowsPrincipal = _ CType(Thread.CurrentPrincipal, WindowsPrincipal)
- B. AppDomain.CurrentDomain.SetThreadPrincipal(_ PrincipalPolicy.WindowsPrincipal) Dim principal As WindowsPrincipal = _ CType(Thread.CurrentPrincipal, WindowsPrincipal).
- C. Dim identity As WindowsIdentity = WindowsIdentity.GetCurrent() Dim principal As New WindowsPrincipal(identity)
- D. Dim identity As WindowsIdentity = _ WindowsIdentity.GetAnonymous() Dim principal As New WindowsPrincipal(identity)

Answer: A

Explanation:

The WindowsPrincipal Class allows code to check the Windows group membership of a Windows user. In particular we can check if the user belongs to domain users group. Furthermore, the SetPrincipalPolicy method specifies how principal and identity objects should be attached to a thread

Reference:

.NET Framework Class Library, WindowsPrincipal Class [Visual Basic] .NET Framework Class Library,
WindowsIdentity Class [Visual Basic]

Incorrect Answers

B: We should use the SetPrincipalPolicy method, not the SetThreadPrincipal Method. **Note:** The AppDomain.SetThreadPrincipal Method sets the default principal object to be attached to threads

C: WindowsIdentity Class represents a Windows user. The GetCurrent method is used to create a WindowsIdentity object that represents the current user. However, we must the WindowsPrincipal class to test if the users are valid domain users.

D: The WindowsIdentity.GetAnonymous Method returns a WindowsIdentity object that represents an anonymous Windows user. This will not help in validating the current user.

Question: 128. (G)

You use Visual Studio .NET to develop a Windows-Bases application named PatTrac. It uses the security class libraries of the .NET Framework to implement security. PatTrac will run within the context of a Windows 2000 domain named MedicalOffice. Calls to a remote Windows 2000 domain named XYZ will occur during the execution of PatTrac.

You want PatTrac to log on to the XYZ domain by using a generic user account.

What should you do?

- A. Create a new instance of the WindowsImpersonationContext class by calling the Impersonate method of the GenericIdentity object and passing the token of the user whom you want to impersonate.
- B. Create a new instance of the WindowsImpersonationContext class by calling the Impersonate method of the WindowsIdentity object and passing the token of the user whom you want to impersonate.
- C. Create a new instance of the ZoneIdentifyPermission class by calling the Impersonate method of the GenericPrincipal object and passing the token of the user whom you want to impersonate.
- D. Create a new instance of the ZoneIdentifyPermission class by calling the Impersonate method of the WindowsPrincipal object and passing the token of the user whom you want to impersonate.

Answer: B

Explanation:

We must impersonate another user. The WindowsImpersonationContext Class, not ZoneIdentifyPermission class, should be used. Furthermore the Impersonate method must be used on a WindowsIdentity object, not on a GenericIdentity object.

Reference:

.NET Framework Class Library, WindowsImpersonationContext Class [Visual Basic]

Question: 129. (G)

You use Visual Studio .NET to develop a Windows-based application. You implement security by using the security classes of the .NET Framework.

Your application includes the following procedure. (Line numbers are included for reference only)

```
01 Public Sub ApproveVacation(ByVal user 1 As String, - 02 ByVal role1 As string, ByVal, user 2 As String, _ 03 ByVal role2 As String) 04 Dim PrincipalPerm1 As _ 05 New PrincipalPermission(user1, role1) 06 Dim principalPerm2 As _ 07 New PrincipalPermission(user2, role2) 08 'Insert new code. 09 'Additional procedure code goes here 10 End Sub
```

You must ensure that both User1 and User2 are members of the same security roles. Which code segment should you insert on line 8?

- A. principalPerm1.IsUnrestricted principalPerm2.IsUnrestricted
- B. principalPerm1.IsSubSetOf(principalPerm2)
- C. principalPerm1.Intersect(principalPerm2).Demand()

D. `principalPerm1.Union(principalPerm2).Demand()`

Answer: C

Explanation:

Union means that either User1 or User2 could have the desired role whereas Intersect means that both User1 and User2 must have the desired role.

Question: 130. (G)

Your company XYZ Inc. standardizes on the .NET Framework as its software development platform. Subsequently, virus attacks cause your company to prohibit the execution of any applications downloaded from the Internet.

You must ensure that all client computers on your intranet can execute all .NET applications originating from your company. You must also ensure that the execution of .NET applications downloaded from the Internet is prohibited. You must expend the minimum amount of administrative effort to achieve your goal.

Which policy should you modify?

- A. Application Domain.
- B. Enterprise
- C. Machine
- D. User

Answer: B.

Explanation:

An Enterprise policy applies to the whole domain of the company. It would require minimal administrative effort to set up.

Reference: .NET Framework Developer's Guide Security Policy Administration Overview

Incorrect Answers:

A: An Application Domain policy is defined by the runtime host (any application that hosts the common language runtime) for setting load-time policy. This level cannot be administered.

C: A machine policy only applies to a single machine.

D: A user policy only applies to a single user.

Question: 131. (G)

You use Visual Studio .NET to create an assembly that will be consumed by other Visual Studio .NET applications. No Permissions should be granted to this assembly unless the assembly makes a minimum permission request for them.

Which code segment should you use?

- A. `<Assembly: _ PermissionSet(SecurityAction.PermitOnly, _ Unrestricted := True)>`
- B. `<Assembly: _ PermissionSet(SecurityAction.PermitOnly, _ Unrestricted := False)>`
- C. `<Assembly: _ PermissionSet(SecurityAction.RequestOptional, _ Unrestricted := True)>`
- D. `<Assembly: _ PermissionSet(SecurityAction.RequestOptional, _ Unrestricted := False)>`

Answer: D

Explanation:

The **RequestOptional** SecurityAction requests for additional permissions that are optional (not required to run). This action can only

be used within the scope of the assembly. The code needs only the minimum set of permissions and no others. It should not be granted any optional permissions that it has not specifically requested. We must therefore use `Unrestricted := False`.

Reference:

.NET Framework Developer's Guide, Requesting Optional Permissions

Incorrect Answers: A, B: The `PermitOnly` `SecurityAction` does not support `Assembly` as a target, it only supports `Class` or `Method` as targets.

C: The assembly must only be granted minimal permissions. It should not be granted any optional permissions that it has not specifically requested.

Question: 132. (G)

Another developer in your company uses Visual Studio .NET to create a component named `MyComponent`. You deploy `MyComponent` to a server. When you execute `MyComponent`, you receive the following error message:

"System.Security.Policy.PolicyException: Failed to acquire required permissions." As quickly as possible, you need to discover which permissions are required by `MyComponent`. What should you do?

- A. Request the source code from the developer who created `MyComponent`. Examine the source code to find the required permissions.
- B. Run the Microsoft CLR Debugger (`DbgCLR.exe`) on the server to view the permissions requested by the application at run time.
- C. Run the Runtime Debugger (`Cordbg.exe`) on the server to view the permissions requested by the application at run time.
- D. Run the Permissions View tool (`Permview.exe`) on the server to view the permissions required by `MyComponent`.
- E. Run the MSIL Disassembler (`Ildasm.exe`) on the server to view permission requests by `MyComponent` that were denied.

Answer: D

Explanation:

Developers can use `Permview.exe` to verify that they have applied permission requests correctly to their code. Additionally, users can run `Permview.exe` to determine the permissions an assembly requires to execute.

Reference:

.NET Framework Tools, Permissions View Tool (`Permview.exe`)

Question: 133. (G)

You develop a Windows-based application called `XYZSecurity` by using Visual Studio .NET and Microsoft SQL Server. The application will perform numerous `Assert`, `Deny`, and `PermitOnly` security operations while it is executing. You must ensure that the application is optimized for fast run-time execution.

What should you do?

- A. Perform declarative security checks.
- B. Perform imperative security checks.
- C. Perform all security checks by using SQL Server security.
- D. Implement a custom security class that retrieves security information from the SQL Server database.

Answer: A

Explanation:

Declarative security checks in the application would be the fastest solution..

Reference:

.NET Framework Developer's Guide, Performing Declarative Security Checks [Visual Basic] .NET Framework Developer's Guide , Adding Declarative Security Support [Visual Basic] Visual Basic and Visual C# Concepts, Adding Imperative Security Checks to Components

Incorrect Answers

A: Imperative security checks allow you to protect specific blocks of code by requiring appropriate permissions. It cannot be used for Assert, Deny, and PermitOnly security operations. **C, D:** SQL Server security would be more scalable, but less optimized.

Question: 134 (D)

You work as a software developer at Company.net. You develop a Windows-based application that processes customer data from a database. Your customer service representative will use the application to view or edit customer data. One procedure in your application calls a function named ProcessCustomer. You want to add code to your application to record error information and performance data relating to ProcessCustomer. This information must be recorded in a log file named InfoLog.txt on the computer that executes the application. In addition, you want to be able to enable and disable logging without recompiling your application, and you want the option of logging error information only, or of logging both error information and performance data. Which code segment should you use?

- A.

```
Dim oLog As New EventLog() Dim oType As EventLogEntryType Try If Not EventLog.SourceExists("CustPerformance") Then EventLog.CreateEventSource("CustPerformance", _ "Application") End If oLog.source = "CustPerformance" oLog.Log = "Application" oType = EventLogEntryType.Information oLog.WriteEntry("Before ProcessCustomer() " & Now, oType) ProcessCustomer() If not EventLog.SourceExists("CustPerformance") Then EventLog.CreateEventSource("CustPerformance", _ "Application") End If oLog.Source = "CustPerformance" oLog.Log = "Application" oType = EventLogEntryType.Information oLog.WriteEntry("After ProcessCustomer() " & Now, oType) Catch oEx As Exception If Not EventLog.SourceExists("CustErrors") Then EventLog.CreateEventSource("CustErrors", _ "Application") End If oLog.Source = "CustErrors" oLog.Log = "Application" oType = EventLogEntryType.Error oLog.WriteEntry("Error details: " & _ oEx.Message, oType) End Try
```
- B.

```
#Const MySwitch As Long Dim 1FH As Long 1FH = FreeFile() Open logFile For Append As #1FH Try #If MySwitch = 4 Then Print #1FH, "Before ProcessCustomer() " & Now #End If ProcessCustomer() #If MySwitch = 4 Then Print #1FH, "After ProcessCustomer() " & Now #End If Catch oEx As Exception #If MySwitch = 1 Then Print #1FH, oEx.Message #End If Close #1FH End Try
```
- C.

```
Dim oWriter As New _ IO.StreamWriter(IO.File.Open(logFile, _ IO.FileMode.Append)) Dim oListener As New TextWriterTraceListener(oWriter) Dim oSwitch As New TraceSwitch("MySwitch", _ "My TraceSwitch") Trace.Listeners.Add(oListner) Try Trace.WriteLinef(oSwitch.TraceVerbose, _ "Before ProcessCustomer() " & Now) ProcessCustomer() Trace.WriteLinef(oSwitch.TraceVerbose, _ "After ProcessCustomer() " & Now) Catch oEx As Exception Trace.WriteLinef(oSwitch.TraceError, _ oEx.Message) Finally oWriter.Close() oWriter = Nothing End Try
```
- D.

```
Dim oWriter As New _ IO.StreamWriter(IO.File.Open(logFile, _ IO.FileMode.Append)) Dim oListener As New TextWriterTraceListener(oWriter) Dim oSwitch As New TraceSwitch("MySwitch", _ "My TraceSwitch") Debug.Listeners.Add(oListener) Try Debug.WriteLinef(oSwitch.TraceVerbose, _ "Before ProcessCustomer() " & Now) ProcessCustomer() Debug.WriteLinef(oSwitch.TraceVerbose, _ "After ProcessCustomer() " & Now) Catch oEx As Exception Debug.WriteLinef(oSwitch.TraceError, _ oEx.Message) Finally oWriter.Close() oWriter = Nothing End Try
```

Answer: C

Question: 135 (E)

You work as a software developer at Company.net. You use Visual Studio .NET to create an application that contains several Windows Forms. One of the Windows Forms uses the Trace class to write debugging information in a local log file.

You need to compile your application so it can be released to users. You want to achieve this goal with the minimum amount of

administrative effort. For performance reasons, you will disable the trace functionality before you deliver the application. You might need to enable the Tracing code after deployment. What should you do?

- A. Set your Configuration Manager to Release, and then compile your application.
- B. Use a TraceSwitch object that enables or disabled your Trace code through the application's configuration file.
- C. During deployment to users' computers, create a shortcut that starts your application with the /TRACE=False command line option.
- D. During deployment to users' computers, create a shortcut that starts your application with the /d:TRACE=False command line option.

Answer: B

Question: 136 (B)

You development team at Company.net is using Visual Studio .NET to create an accounting application, which contains a substantial amount of code. Sometimes a developer cannot complete a portion of code until dependencies are completed by another developer. In these cases, the developer adds a comment in the application code about the work left incomplete. Such comments always begin with the UNDONE. You open the application code on your computer. As quickly as possible, you need to view each comment that indicates incomplete work. What should you do?

- A. Configure the Task List window to show all tasks.
- B. Use the Build Comment Web Pages dialog box to build Comment Web Pages for the entire solution.
- C. Open a code window and use the Find in Files dialog box to search the application code for UNDONE.
- D. Open a code window and use the Find dialog box to search all open documents for UNDONE.

Answer: B

Question: 137 (D)

You develop a Visual Studio .NET application that contains a function named CompanyUpdate. For debugging purposes, you need to add an entry to a log file whenever CompanyUpdate is executed. The log file is named DebugLog.txt. For maximum readability, you must ensure that each entry in DebugLog.txt appears on a separate line. Which code segment should you use?

- A. Dim oWriter As New IO.StreamWriter(IO.File.Open _ (logFile, IO.FileMode.Append)) Dim oListener As New _ TextWriterTraceListener(oWriter) Debug.Listeners.Add(oListener) Debug.WriteLine("CompanyUpdate " & Now)
- B. Dim oWriter As New IO.StreamWriter(IO.File.Open _ (logFile, IO.FileMode.Append)) Dim oListner As New _ TextWriterTraceListener(oWriter) Debug.Listeners.Add(oListener) Debug.Write("CompanyUpdate " & Now)
- C. Dim oListener As New TextWriterTraceListener() oListener.Name = logFile Debug.Listeners.Add(oListener) Debug.WriteLine("CompanyUpdate " & Now)
- D. Dim oListener As New TextWriterTraceListener() oListener.Name = logFile Debug.Listeners.Add(oListener) Debug.Write("CompanyUpdate " & Now)

Answer: A, D

Question: 138 (D)

You work as a software developer at Company.net You use Visual Studio .NET to create an application that tracks support incidents for your technical support department at Company.net. You implement the Trace class to write information about run-time errors in a local log file. You also implement a TraceSwitch object named CompanySwitch, which can turn Trace logging on and off as needed. To maximize application performance, you ensure that CompanySwitch is disabled by default.

You set your Configuration Manager to Release. You compile the application and deploy it to a shared folder on your company intranet. Fifty users access the application from a shortcut on their desktops. One user receives error messages while running the

application. You device to enable verbose trace logging within the application for that user. You must ensure that you do not affect application performance for the other users. Which action or actions should you take? (Choose all that apply)

- A. Set your Configuration Manager to Debug. Compile your application and deploy it locally on the user's computer. Create a new shortcut on the user's desktop to access the local copy of the application.
- B. Copy the deployed version of the application from the shared folder. Deploy it locally on the user's computer. Create a new desktop shortcut on the user's desktop to access the local copy of the application.
- C. Edit the .config file for the application on the user's computer to enable CompanySwitch with a value of 4.
- D. Edit the .config file for the application on the shared folder to enable CompanySwitch with a value of 4.
- E. Start the application with the /d:TRACE=TRUE command line option.
- F. Start the application with the /TRACE CompanySwitch 4 command line option.

Answer: A, B, C

Question: 139 (B)

You develop a Windows-based application to manage business contacts for Company.net. The application retrieves a list of contacts from a central database. The list is managed locally in a DataSet object named listDataSet, and it is displayed in a DataGrid control.

You create a procedure that will conduct a search after you enter a combination of personal name and family name. Your application currently includes the following code segment: Dim dv As New DataView()Dim i As Integer dv.Table = listDataSet.Tables(0) dv.Sort = "FamilyName, PersonalName" DataGrid1.DataSource = dvYou need to search for a contact whose personal name is Exam and whose family name is Sheets. Which code segment should you use?

- A. Dim values() As Object = ("Sheets", "Exam") i = dv.Find(values)
DataGrid1.CurrentRowIndex = i
- B. Dim values() As Object = ("Sheets, Exam") i = dv.Find(values)
DataGrid1.CurrentRowIndex = i
- C. Dim values() As Object = ("Sheets", "Exam") i = dv.Find(values)
DataGrid1.CurrentRowIndex = i
- D. Dim values() As Object = ("Sheets, Exam") i = dv.Find(values)
DataGrid1.CurrentRowIndex = i

Answer: C

Question: 140 (D)

You work as a software developer at Company.net You develop a Windows-based application that uses a Microsoft SQL Server database to store and retrieve data. You decide to create a central error-handling procedure that processes all data errors that occur in your application. You must ensure that your application displays all error information that is received from the database. How should you write the error-handling procedure?

- A. Public Sub DisplaySqlErrors(ByVal CompanyEx As SqlException) MessageBox.Show("Error: " & CompanyEx.ToString()) End Sub
- B. Public Sub DisplaySqlErrors(ByVal CompanyEx As SqlException) MessageBox.Show("Error: " & CompanyEx.Message) End Sub
- C. Public Sub DisplaySqlErrors(ByVal CompanyEx as SqlException) Dim x As SqlError For Each x In CompanyEx.Errors
MessageBox.Show("Error: " & x.ToString()) Nex End Sub
- D. Public Sub DisplaySqlErrors(ByVal CompanyEx As SqlException) Dim x As Exception For Each x In CompanyEx.Errors
MessageBox.Show("Error: " & x.ToString()) Next End Sub

Answer: D

Question: 141 (C)

You work as a software developer at Company.net. Your application uses a DataSet object to maintain a working set of data for your users. Users frequently change information in the DataSet object. Before you update your database, you must run data validation code on all user changes. You need to identify the data rows that contain changes. First you create a DataView object. What should you do next?

- A. Set the RowStateFilter.CompareTo method.
- B. Set the RowStateFilter.Equals method.
- C. Set the RowStateFilter property to CurrentRows.
- D. Set the RowStateFilter property to ModifiedCurrent.

Answer: B

Question: 142 (C)

You develop a Windows-based inventory application for Company.net. The application will use a SqlDataAdapter object, a SqlCommandBuilder object, and a DataSet object to retrieve data from and manage updates to a Microsoft SQL Server database.

You write the following code to set up the objects: Dim cn As New SqlConnection("server=COMPANY;database=Inventory") Dim ds As New DataSet() Dim da As New SqlDataAdapter("SELECT " & _ "ProductDescription, UnitPrice FROM Products", cn) Dim cb As SqlCommandBuilder = New SqlCommandBuilder(da) When you test the application, you can successfully retrieve data from the DataSet object. However, when you try to send modified data back to the database, your changes are not saved. How should you correct this problem?

- A. Specify a SelectCommand property for the SqlDataAdapter object.
- B. Specify an UpdateCommand property for the SqlDataAdapter object.
- C. Include the primary key field of the Products table in the SELECT query.
- D. Include a WHERE clause in the SELECT query.

Answer: C

Question: 143 (C)

You work as a software developer at Company.net. You develop a Windows-based order entry application. The application uses a DataSet object named CompanyDataSet to manage client data while users edit and update customer records. The DataSet object contains a DataTable object named creditAuthorizationDataTable. This object contains a field named MaxCredit, which specifies the credit limit for each customer.

Customer credit limits cannot exceed \$20,000. Therefore, your application must verify that users do not enter a larger amount in MaxCredit. If a user does so, the user must be notified, and the error must be corrected, before any changes are stored permanently in the database. You create a procedure named OnRowChanged. This procedure sets the DataTable.Row.RowError property for each row that includes an incorrect credit limit.

OnRowChanged will run each time a user changes data in a row. OnRowChanged contains the following code segment:

```
Sub OnRowChanged(sender As Object, args As DataRowChangeEventArgs) Handles  
    _creditAuthorizationDataTable.RowChanged If Cdbl(args.Row("MaxCredit")) > 20000 Then args.Row.RowError = "Over credit limit."  
End If End sub
```

Before updating the database, your application must identify and correct all rows that are marked as having an error. Which code segment should you use?

- A. For Each myRow In _creditAuthorizationDataTable.GetErrors() MessageBox.Show("CustID = " & _ myRow("CustID").ToString() & " " & _ "Error = " & myRow.RowError) Next
- B. For Each myRow In _creditAuthorizationDataTable.HasErrors() MessageBox.Show("CustID = " & _ myRow("CustID").ToString() & " " & _ "Error = " & myRow.RowError) Next
- C. Dim vw As DataView = New DataView(_
 CompanyDataSet.Tables("CreditAuthorization"), _

```

DataRowState.ModifiedCurrent) Message.Show("CustID = " & vw("CustID") _
.ToString() & " Error"
D. Dim vw As DataView = New DataView( _
CompanyDataSet.Tables("CreditAuthorization"), _
DataRowState.ModifiedOriginal) MessageBox.Show("CustID = " & vw("CustID")_
ToString() & " Error"

```

Answer: B

Question: 144 (C)

You work as a software developer at Company.net. You develop a Windows-based application to manage inventory. The application calls a Microsoft SQL Server stored procedure named sp_UpdateCompanyPrices.

sp_UpdateCompanyPrices performs a SQL UPDATE statement that increases prices for selected items in an inventory table. It returns an output parameter named @totalprice as a result set that contains all of the records that were updated. @totalprice contains the sum of the prices of all items that were updated. You implement a SqlCommand object that executes sp_UpdateCompanyPrices and returns the results to a SqlDataReader object. The SqlDataReader object gives you access to the data in the result set, which is displayed in a list box on your Windows Form. The value of @totalprice must also be displayed in a text box on your Windows Form. You need to write code that will retrieve this value. Which code segment should you use?

- A. Do Until reader.Read() TextBox1.Text = _ com.Parameters("@totalprice").Value.ToString() Loop reader.Close()
- B. While reader.Read() TextBox1.Text = _ com.Parameters("@totalprice").Value.ToString() End While reader.Close()
- C. TextBox1.Text = _ com.Parameters("@totalprice").Value.ToString() reader.Close()
- D. reader.Close() TextBox1.Text = _ com.Parameters("@totalprice").Value.ToString()

Answer: C

Question: 145 (G)

You use Visual Studio .NET to develop a Windows-based application for Company.net. The application will implement a role-based authorization scheme that is based on a Microsoft SQL Server database of user names. Users will enter their user names in a text box named username on the logon screen. You must ensure that all users are assigned the Supervisor role and the Volunteer role by default. Which code segment should you use?

- A. Dim identity As WindowsIdentity = _ WindowsIdentity.GetCurrent() Dim RoleArray As String() = {"Supervisor", "Volunteer"} Dim principal As _ New GenericPrincipal(identity, RoleArray)
- B. Dim identity As New GenericIdentity(username.Text) Dim RoleArray As String() = {"Supervisor", "Volunteer"} Dim principal As _ New WindowsPrincipal(identity)
- C. Dim identity As New GenericIdentity(username.Text) Dim RoleArray As String() = {"Supervisor", "Volunteer"} Dim principal As _ New GenericPrincipal(identity, RoleArray)
- D. Dim identity As WindowsIdentity = _ WindowsIdentity.GetAnonymous() Dim RoleArray As String() = {"Supervisor", "Volunteer"} Dim principal As _ New GenericPrincipal(identity, RoleArray)

Answer: A

Question: 146 (A)

You work as a software developer at Company.net. You use Visual Studio .NET to create a control that will be used on several forms in your application. It is a custom label control that retrieves and displays your company's current stock price. The control will be displayed on many forms that have different backgrounds. You want the control to show as much of the underlying form as possible. You want to ensure that only the stock price is visible. The rectangular control itself should not be visible. You need to add code to the Load event of the control to fulfill these requirements.

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

Choose two)

- A. Me.BackColor = Color.Transparent
- B. Me.ForeColor = Color.Transparent
- C. Me.BackgroundImage = Nothing
- D. Me.SetStyle(ControlStyles.UserPaint, True)
- E. Me.SetStyle(ControlStyles.SupportTransparentBackColor, _True)

Answer: A

Question: 147 (B)

You use Visual Studio .NET to create a Windows-based application that will track Company.net Study Guides sales. The application's main object is named CompanyStudyGuide. The CompanyStudyGuide class is created by the following definition: Public Class CompanyStudyGuide End Class You write code that sets properties for the CompanyStudyGuide class. This code must be executed as soon as an instance of the CompanyStudyGuide class is created. Now you need to create a procedure in which you can place your code. Which code segment should you use?

- A. Public Sub New()
- B. Public Sub CompanyStudyGuide()
- C. Public Function New() As Boolean
- D. Public Function CompanyStudyGuide() As Boolean
- E. Public Function New() As CompanyStudyGuide
- F. Public Function CompanyStudyGuide() As CompanyStudyGuide

Answer: A

Question: 148 (G)

You work as a software developer at Company.net. You create a component named CompanyComponent and digitally sign it with a valid X.509 certificate. Then you create a client application named CompanyClient, which will use classes exposed by CompanyComponent. For security reasons, you must ensure that the X.509 certificate of CompanyComponent is verified when it is used by CompanyClient. What should you do?

- A. Write code in CompanyClient to check the PublisherIdentityPermissionAttribute property of the System.Security.Permission class after instantiating a class from CompanyComponent.
- B. Write code in CompanyClient to check the Identity.IsAuthenticated property of the WindowsPrincipal class after instantiating a class from CompanyComponent.
- C. Run Secutil.exe to extract the X.509 certificate data from CompanyComponent. Embed the extracted data in CompanyClient as a constant. Use the System.Security.Permissions.PublisherIdentityPermission class to compare the data to the CompanyComponent X.509 certificate at run time.
- D. Run the Strong Name Tool (Sn.exe) to create a string name for CompanyComponent. Add CompanyComponent to the full trust list on any computer that will host CompanyComponent.

Answer: C

Question: 149 (A)

You develop a Windows-based application by using Visual Studio .NET. The application includes a form named MainForm and a class named Company. MainForm includes a button named createCompanyButton. You must ensure that your application creates an instance of Company when a user clicks this button. You want to write the most efficient code possible. Which code segment should you use?

- A. Dim con As Company = New Object()
- B. Dim con As New Company

- C. Dim con As Object con = New Company()
- D. Dim con As Company con = New Object()

Answer: B

Question: 150 (B)

You use the .NET Framework to develop a new Windows-based application. The application includes a COM component that you created. Company.net company policy requires you to sign the CompanyOp assembly with a strong name. However, issues of company security require that you delay signing the assembly for one month. You need to begin using the application immediately on a pilot basis. You must achieve your goal with the least possible effort. What should you do?

- A. Create a reference to the COM component through the Visual Studio .NET IDE.
- B. Create the CompanyOp assembly by using the Type Library Importer (Tlbimp.exe).
- C. Create the CompanyOp assembly by using the TypeLibConverter class in the System.Runtime.InteropServices namespace.
- D. Create a custom wrapper by creating a duplicate definition or interface of the class in managed source code.

Answer: C

Question: 151 (B)

You work as a software developer at Company.net. You write a custom control named Filer that opens and reads text files stored on your company intranet. Filer uses third-party assemblies in a subroutine named OpenFile. Filer verifies where a given file should be located and then tries to open it. Exceptions can occur if the file is not found or if it is already opened by another user. You want Filer to pass exception information back to the form that contains it. This form will need to access information such as the name of the file, the message associated with the exception, and the log file that describes why a third-party assembly cannot be loaded. You write the following code segment. Try Filer.OpenFile() Catch ex As Exception End Try Now you need to add code to the catch block to provide the necessary information to the appropriate form. Which code segment should you use?

- A. Throw New FileNotFoundException("Filer Exception")
- B. Throw New FileNotFoundException("Filer Exception", ex)
- C. Throw New FileNotFoundException(ex.Message)
- D. Throw New FileNotFoundException(ex.Message, ex.Source)

Answer: C

Question: 152 (A)

You work as a software developer at Company.net. You create a form in your Windows-based application. The form contains a command button named checkCompanyButton. When checkCompanyButton is clicked, the application must call a procedure named GetCompany. Which two actions should you take? (Each correct answer presents part of the solution. Choose two)

- A. Add arguments to the GetCompany declaration to accept System.Object and System.EventArgs.
- B. Add arguments to the checkCompanyButton_Click declaration to accept System.Object and System.EventArgs.
- C. Add code to GetCompany to call checkCompanyButton_Click.
- D. Add the following code segment at the end of the GetCompany declaration: Handles checkCompanyButton.Click
- E. Add the following code segment at the end of the checkCompanyButton_Click procedure: Handles GetCompany

Answer: B, D

Question: 153 (B)

You work as a software developer at Company.net. You develop an application that includes a Contact Class, which is defined by the following code:

```
Public Class Contact Private name As String Public Event ContactSaved() Public Property Name() Get Return name End Get Set(ByVal Value) name = Value End Set End Property Public Sub Save() 'Insert Save Code. RaiseEvent ContactSaved() End Sub End Class
```

You create a form named MainForm. This form must include code to handle the ContactSaved event raised by the Contact object. The Contact object will be initialized by a procedure named CreateContact. Which code segment should you use?

- A. Public Class MainForm Private oContact As New Contact() Private Sub HandleContactSave() 'Insert event handling code. End Sub Private Sub CreateContact() oContact.Name = "Company" oContact.Save() End Sub End Class
- B. Public Class MainForm Private WithEvents oContact As New Contact() Private Sub HandleContactSave() 'Insert event handling code. End Sub Private Sub CreateContact () oContact.Name = "Company" oContact.Save() End Sub End Class
- C. Public Class MainForm Private WithEvents oContact As New Contact() Private Sub HandleContactSave() Handles oContact.ContactSaved 'Insert Event handling code. End Sub Private Sub CreateContact () oContact.Name = "Company" oContact.Save() End Sub End Class
- D. Public Class MainForm Private WithEvents oContact As New Contact() Private Sub HandleContactSave() _ Handles oContact.ContactSaved 'Insert event handling code. End Sub Private Sub CreateContact () Dim oContact As New Contact() oContact.Name = "Company" oContact.Save() End Sub End Class

Answer: D

Question: 154 (B)

You work as a software developer at Company.net. You use Visual Basic .NET to create an assembly named ContactLive. ContactLive exposes a class named Contacts.

Contacts is defined by the following code segment. (Line numbers are included for reference only.

```
01 <ComClass(Contacts.ClassID, Contacts.InterfaceID, _ 02 Contacts.EventsID)> 03 Public Class Contacts 04 Public Const ClassID As String = _ 05 "372F928-08B8-49b5-9816-1A5E1594AFBE" 06 Public Const InterfaceID As String = _ 07 "30D0B51F-C10F-4023-8653-689EFF95C32" 08 Public Const EventsID As String = _ 09 "1DA0C71D-5AAA-4432-9BD3-B97D00454378" 10 11 'Insert new code. 12 13 Public Function GetContactName(ByVal Index _ 14 As Integer) As String 15 'Insert code to return a Contact name. 16 End Function 17 End Class
```

You need to add code on line 11 to ensure that Contacts can be instantiated by a Visual Basic 6.0 application. Which code segment should you add?

- A. Public Sub New() MyBase.New() End Sub
- B. Public Sub Initialize() MyBase.Initialize() End Sub
- C. Public Sub Instantiate() MyBase.Instantiate() End Sub
- D. Public Sub COMRef() MyBase.InterfaceID() End Sub

Answer: B

Question: 155 (B)

You work as a software developer at Company.net. You develop a Windows-based application that includes two objects named CompanyContact and CompanyEmployee. CompanyEmployee inherits from CompanyContact, and CompanyContact exposes an event named DataSaved. You want to raise the DataSaved event from CompanyEmployee. What should you do?

- A. Call the RaiseEvent method from CompanyEmployee and pass DataSaved as the event name.
- B. Add the Public keyword to the DataSaved declaration in CompanyContact. Call the RaiseEvent method from

CompanyEmployee.

- C. In CompanyContact, create a protected method named RaiseDataSaved that explicitly raises the DataSaved event. Call RaiseDataSaved from CompanyEmployee.
- D. In CompanyEmployee, create a protected method named RaiseDataSaved that explicitly raises the DataSaved event in CompanyContact. Call RaiseDataSaved to fire the event.

Answer: A

Question: 156 (A)

You work as a software developer at Company.net. You develop a Windows-based application that includes a form named CompanyForm. This form includes a ComboBox control named CompanyComboBox. When CompanyForm is loaded, the following code is executed: CompanyComboBox.DropDownStyle = _ ComboBoxStyle.DropDownList
CompanyComboBox.DataSource = _ oDS.Tables("Companies").DefaultView CompanyComboBox.DisplayMember = "ContactName"
CompanyComboBox.ValueMember = "CompanyID" When the user makes a selection from CompanyComboBox, the appropriate CompanyID must be retrieved. You want to write the shortest possible code segment to achieve this goal. Which property of CompanyComboBox should your application retrieve?

- A. SelectedItem
- B. SelectedValue
- C. Text
- D. ValueMember

Answer: B

Question: 157. (B)

You create an assembly by using Visual Studio .NET for your client, military agency. The assembly is responsible for writing and reading confidential data of military movement to and from an XML data file onto an encrypted hard drive. You need to implement security in the assembly. What should you do?

- A. Implement declarative security and execute the permission demand to allow access to the file system.
- B. Implement imperative security and execute the permission demand to allow access to the file system.
- C. Implement imperative security and execute the minimum permission request to allow access to the file system.
- D. Implement declarative security and execute the minimum permission request to allow access to the file system.

Answer: D

Explanation:

You can use declarative code access security to request permissions for the entire assembly. SecurityAction flags that can be specified in an assembly-wide directive. When SecurityAction.RequestMinimum is specified, it makes a request to the common language runtime to be granted the requested permission. If the requested permission is not granted by the security policy, the assembly will not execute.

Question: 158. (A)

You are creating an application for a large hotel chain firm, Awana Hotels. The application will show list a of vacant rooms in a ListBox control on a form. By double-clicking any of the rooms in the list box, a new form will appear that displays a graphical representation of each room. You find that the desktop becomes cluttered easily. You do not want the users of the application to resize the blueprint forms larger than 300 pixels by 300pixels. Which of the following code fragments should you use to restrict the size of the blueprint forms? (Select the best choice.)

- A. BPForm.MinimumWidth = 300; BPForm.MinimumHeight = 300
- B. BPForm.MaximumSize = New Size(300, 300)

- C. BPForm.MaximizedBounds = New Rectangle(0, 0, 300, 300)
D. BPForm.MinimumSize = New Size(300, 300)

Answer: B Explanation:

The MaximumSize property will prevent a form's width or height from exceeding a given range. The MaximumSize property accepts a Size object that specifies the maximum width and height of the form. The MinimumWidth, MinimumHeight and MinimumSize properties prevent a form from being reduced in size beneath a given range. The MaximizedBounds property determines the size of a form when it is maximized.

Question: 159. (D)

You have recently upgraded your skills to a .Net software engineer. Which of the following debugging operations are not valid using Visual Basic .NET breakpoints? (Select all choices that are correct.)

- A. Stop execution at a specified line of code when that section of code is executed for the fifth time.
B. Stop execution the instant that the value of a given variable changes.
C. Stop execution at a specified line of code when the number of times that section of code has been executed is a multiple of 25.
D. Stop execution at a specified line of code when a given expression evaluates to Stop.
E. Stop execution the instant that the value of a variable changes to False.

Answer: B, E

Explanation:

You can use Visual Basic .NET breakpoints to stop execution at a specified line of code when that section of code is executed for the fifth time, to stop execution at a specified line of code when the number of times that section of code has been executed is a multiple of 25, and to stop execution at a specified line of code when a given expression evaluates to Stop. A breakpoint that halts execution at any line of code the instant that a variable's value changes or becomes False is known as a data breakpoint. Data breakpoints cannot be used in Visual Basic .NET. In previous versions of Visual Basic, you could set a data breakpoint that would cause execution to stop on any line of code whenever a variable's value changed. In Visual Basic .NET, you must set breakpoints on each line of code to evaluate.

Question: 160. (D)

You are debugging a Windows Form application. Your colleague, Company used a SqlDataReader object to populate a custom control. Due to miscommunication, your code uses the GetBoolean method to read data from a particular column that is a Boolean. Which of the following exceptions will be thrown? (Select the best choice.)

- A. A VerificationException object will be thrown.
B. The FillError event will be raised.
C. An ApplicationException object will be thrown.
D. An InvalidCastException object will be thrown.

Answer: D

Explanation:

An InvalidCastException object is thrown when a casting operation cannot be successfully performed. The GetBoolean method of the SqlDataReader object expects to find Boolean values in the column from which it is reading. If the value in the column cannot be cast to a Boolean value, then an InvalidCastException object is created. The FillError event of the SqlDataAdapter class is raised when data cannot be converted properly while filling a data set. The ApplicationException class is used to throw custom exceptions. A VerificationException object is created when an application's code cannot be verified as safe through security policies.

Question: 161. (D)

TesESing Inc uses Visual SourceSafe to manage code versioning. Visual SourceSafe is configured to use shared checkouts. You are the lead developer. Two of your developer, Tim and Smith checked out the same files and performed debugging on them. Which of

the following methods should you use to handle both sets of code? (Select the best choice.)

- A. Tim and Smith should combine changes on one computer and check in only one set of files.
- B. First, Tim should check in Smith's files, then Tim should check in his files. Tim will be responsible for resolving conflicts.
- C. Smith and Tim should combine changes on both computers and check in both sets of files.
- D. First, Tim should check in his files, then Smith's should retrieve the latest code and resolve any conflicts on Smith's computer.

Answer: D

Explanation:

When Visual SourceSafe is configured for shared checkouts, it is possible for multiple developers to check out the same files and modify them. When the modified files are checked into Visual SourceSafe, conflicts must be resolved. The process of resolving conflicts can be simplified if a single developer retrieves the latest version of the files after another developer has checked in his or her version of the files. After the latest version of code has been retrieved, Visual SourceSafe will attempt to merge conflicts if the automatic merge resolution is configured. The developer who is responsible for resolving conflicts will be notified if any conflicts must be handled manually. After the developer resolves conflicts on his or her computer and tests the merged code, the merged code should be checked into Visual SourceSafe.

Question: 162. ((D))

You have created an application for Southwind Online Traders that accesses a Microsoft SQL Server database. Several customers have been experiencing several major errors when they try to place orders on the database. Your team wants more detailed information about these errors. Which of the following actions should you perform? (Select the best choice.)

- A. Recompile the application and include the /d:TRACE = True option on the command line.
- B. Edit the application configuration file and set the trace level to 4.
- C. Start the application from the command line and include the /d:trace=4 argument.
- D. Use #CONST statements to set the trace levels and recompile the application.

Answer: B

Explanation:

You can change the settings of trace switches through an application configuration file. The configuration file of an application is named application_name.exe.config. Setting a trace switch to 4, or verbose mode, provides the greatest level of detail in trace messages. Recompiling the application and including the /d:TRACE = True option on the command line will enable tracing, but will not affect the trace level. #CONST is used to specify compiler settings. Recompiling an application is not necessary in order to change the value of a trace switch. Including the /d:trace=4 argument on the command line will not change the trace level.

Question: 163. (B)

You have written an application named SpaceUtilization that uses an assembly named MathLib to calculate vehicle space utilization for Consolidated Parcels. You install your application to the C:\Program Files\SpaceUtilization folder, and install the assembly to the C:\Program Files\MathLib folder. When you try to run the application, it fails with a TypeLoadException. Which of the following actions will not correct the problem? (Each choice represents a complete solution to the problem.) (Select 4 choices.)

- A. Uninstall the assembly and reinstall it to the C:\Program Files\SpaceUtilization folder.
- B. Add the MathLib assembly to the GAC.
- C. Edit the shortcut for the SpaceUtilization application and change the startup path to C:\Program Files\MathLib.
- D. Add the following entry to the startup section of the C:\Program Files\SpaceUtilization\SpaceUtilization.config file: <assemblyBinding xmlns="urn:schemas-Microsoft-com:asm:v1">
<probing privatePath="..\MathLib"> </assemblyBinding>
- E. Add C:\Program Files\MathLib to the system path.
- F. Add the following entry to the runtime section of the C:\Program Files\SpaceUtilization\SpaceUtilization.exe.config file:

<assemblyBinding xmlns="urn:schemas-Microsoft-com:asm:v1" >probing privatePath="..\MathLib"> </assemblyBinding>
G. Uninstall the assembly and reinstall it to the C:\Windows\Microsoft.Net\Framework\MathLib folder.

Answer: C, D, E, G

Explanation:

To correct the TypeLoadException error that occurs in this scenario, you can either install the assembly in a valid location or use the configuration file to point the application to the location of the assembly. TypeLoadException is thrown when a required assembly cannot be found. By default, the common language runtime (CLR) will search for the assembly in the application folder. The CLR will also search the folders specified in the privatePath attribute of the probing element of the assemblyBinding element in the runtime section of the application's configuration file. Publishing the assembly in the global assembly cache (GAC) will also enable the application to find the assembly. None of the other options will have any effect on the application's ability to locate the assembly.

Question: 164. (D)

You are working as a maintenance programmer for Coders Inc. A stored procedure made by your colleague is not returning the right values. The stored procedure is located in a Microsoft SQL Server 2000 database Which window in Visual Studio .NET should you use to select the stored procedure to debug? (Select the best choice.)

- A. Server Explorer
- B. Command
- C. Task List
- D. Output

Answer: A

Explanation:

You can debug Microsoft SQL Server stored procedures with version 6.5 and Service Pack 3 or later while in Visual Studio .NET. First, use the Server Explorer window to establish a connection to your database. Next, navigate through the database until you find the stored procedure that you want to debug in the stored procedure node. Then, right-click the stored procedure and choose the Step Into Stored Procedure option.

Question: 165. (G)

Your application features several advanced operations that should only be performed by Subject Lecturers of the School of International Banking. In your organization, all project manager useraccounts are members of the SubjectLecturers group in the Windows NT PROGRAMMING domain. In order to show the advanced features of the frmOptions form, you write the followingcode:

```
Dim oOptions As New frmOptionsDim oldentity As WindowsIdentity = WindowsIdentity.GetCurrent Dim oPrincipal As New WindowsPrincipal(oldentity) If oPrincipal.IsInRole("SubjectLecturers") Then oOptions.ShowAdvancedFeatures() End If
```

When you execute this code, the options form is displayed, but the advanced features are not shown.Which of the following actions should you perform to display the options form with the advanced features? (Select the best choice.)

- A. Initialize the oldentity object as WindowsIdentity.GetAnonymous.
- B. Change the If statement to If oldentity.IsSystem Then.
- C. Change the value that is passed to the IsInRole method call to PROGRAMMING\SubjectLecturers.
- D. Change the value that is passed to the IsInRole method call to PROGRAMMING.

Answer: C

Explanation:

To display the options form with the advanced features, you should change the value that is passed to the parameter of the `IsInRole` method call to `PROGRAMMING\SubjectLecturers`. When specifying a Windows group as a parameter to the `Principal.IsInRole` method, the domain or the computer name should be specified in the parameter. Initializing the `oldentity` object with the `GetAnonymous` method would cause the `oldentity` object to have only the limited permissions that are available to anonymous users. The `IsSystem` method of the `Identity` class returns `True` if the associated user account is flagged as a System account. The `IsSystem` method does not indicate whether the account is a member of the `PROGRAMMING\SubjectLecturers` group.

Question: 166. (A)

You use Visual Studio .NET to create a Windows-based application called `CompanyTimeSheetApp`. The main form of the application contains several check boxes that correspond to application settings. One of the `CheckBox` controls is named `overtimeCheckBox`. The caption for `overtimeCheckBox` is "Overtime". You must enable users to select or clear this check box by pressing `ALT+A`. Which two actions should you take? (Each correct answer presents part of the solution. Choose two)

- A. Set `overtimeCheckBox.AutoCheck` to `True`.
- B. Set `overtimeCheckBox.AutoCheck` to `False`.
- C. Set `overtimeCheckBox.Tag` to "&Overtime".
- D. Set `overtimeCheckBox.CheckState` to `Unchecked`.
- E. Set `overtimeCheckBox.CheckState` to `Indeterminate`.
- F. Set `overtimeCheckBox.Apperance` to `Button`.
- G. Set `overtimeCheckBox.Apperance` to `Normal`.
- H. Set `overtimeCheckBox.Text` to "&Overtime".

Answer: A, H

Explanation:

The `AutoCheck` property must be set to `True` so that the `CheckBox` automatically is changed when the check box is accessed. The `Text` property contains the text associated with this control. By using the `&`-sign we define a shortcut command for this control. "&Overtime" defines the shortcut `ALT+A`.

Question: 167. (B)

You use Visual Studio .NET to create a Windows-based application named `DrugTestApp`. `DrugTestApp` will be used by five medical service representatives to access a central database to retrieve drug results for trucking customers. All five representatives use client computers that are connected to the company intranet. All client computers have Windows XP Professional and the .NET Framework installed. However, disk space is running out. What should you do?

- A. Copy your application to a shared folder on your company intranet. Create a shortcut to your application on the desktop of each client computer.
- B. Create a distribution package by using the Visual Studio .NET Setup Wizard. Exclude the dependency for the .NET Framework. Install the distribution package on each client computer.
- C. Copy your application to each client computer. Create a shortcut to your application on the desktop of each client computer.
- D. Create a distribution package by using the Visual Studio .NET Setup Wizard. Set the distribution package's Compression property to `Optimized for size`. Install the distribution package on each client computer.

Answer: C

Explanation:

The .NET Framework is required on each system that runs Visual Basic .NET application. Installed the .NET Framework is 30 MB. Windows XP already has the .NET Framework included in the operating systems, so we don't have to distribute it. We can simply copy the application to each client computer and manually create a shortcut to the application.

Question: 168. (C)

As a developer at Company you develop a new order fulfillment application that reuses existing data access components developed earlier. One of these components returns a `DataSet` object that contains the data for all customer orders for the previous year. You

want your application to display orders for individual product numbers that are backordered. Users will specify the appropriate product numbers at run time. What should you do?

- A. Use the DataSet.Reset method.
- B. Use the DataSet.Update method.
- C. Set the RowFilter property of the DataSet object by using a filter expression.
- D. Create a RowFilter object and set the RowStateFilter property by using a filter expression.
- E. Create a DataView object and set the RowStateFilter property by using a filter expression.
- F. Create a DataView object and set the RowFilter property by using a filter expression.

Answer: F

Explanation:

You filter data by setting the RowFilter property. The RowFilter property takes a String that can evaluate to an expression to be used for selecting records. RowFilter is a property of the DataView object.

Question: 169. (C)

You use Visual Studio .NET to develop a Windows-based application to obtain flight bookings placed by customers. The application will interact with a Microsoft SQL Server database. Your application will display booking information from a table named FlightBookingTable. You use ADO.NET to access the data from the database. Statistics show that the error rate per component is increasing. You must ensure that any type of mismatch errors between your application code and the database are caught at compile time rather than at run time. Which two actions should you take? (Each correct answer presents part of the solution. Choose two)

- A. Create an XML style sheet for FlightBookingTable.
- B. Create an XML namespace for FlightBookingTable.
- C. Create a typed DataSet object based on the XML schema.
- D. Create a typed DataSet object based on the XML style sheet.
- E. Create a TypeDelegator class based on the XML namespace.
- F. Create an XML schema for FlightBookingTable.

Answer: C, F

Explanation:

We need to create an XML schema that describes the structure of the data. From this XML schema we can create a typed DataSet object.

Question: 170. (A)

You are developing a Windows Application for Wingrove. To speed up development time, you have inherited an application from a former employee. The first line of the project has an Option Strict On statement. What effect will this statement not have on the application? (Select all correct answers.)

- A. Variables must be declared explicitly.
- B. String comparisons will be based on case-insensitive text.
- C. Late bound variables are allowed.
- D. Data conversions that will result in data loss are prevented.
- E. Variables are not required to be explicitly declared.

Answer: B, C, E

Explanation:

The Option Strict statement restricts how implicit data conversions are performed when values are assigned to a variable. If data will be lost in the conversion process, such as when the value of an integer variable is assigned to a short variable, then a run-time error

message will appear. In order for Option Strict to determine what type of data a variable can hold, all variables must be explicitly declared. The Option Compare statement is used to determine string comparisons.

Question: 171. (C)

You are creating a Windows Form application for purchasing executives to use at Acme Manufacturing. You need to save the data once a row in a DataTable object is successfully edited. Which event should you handle? (Select the best choice.)

- A. RowUpdated
- B. DataSourceChanged
- C. Changed
- D. RowChanged

Answer: D

Explanation:

The RowChanged event of a DataTable object is raised when a DataRow object is modified. The RowChanged event receives a DataRowChangeEventArgs argument that contains both an Action property and a Row property. The Action property reveals the action performed on the row. The Row property returns the DataRow object that was modified. The DataSourceChanged event is a DataGridView event that occurs when the DataSource property changes. The Changed event is a FileSystemWatcher event that occurs when a file in a given folder is modified. The RowUpdated event is a DataAdapter event that occurs when a command is run.

Question: 172. (A)

You use Visual Studio .NET to create a payment form for customers of GeekBooks Inc. The form enables users to enter credit card payment information. The form contains a text box named txtCreditCardNo. If a user enters an invalid telephone number, the form must notify the user of the error. You use a function named ValidateCreditCardXMLService that calls an XML web service to validate the creditcard number entered. You include an ErrorProvider control named ErrorProvider1 in your form. Which additional code segment should you use?

- A. Private Sub txtCreditCard_Validated _ (ByVal sender As Object, _ ByVal e As System.EventArgs) _ If ValidateCreditCardXMLService() = False then _ ErrorProvider1.SetError(txtCreditCard, "Invalid Credit Card.") End If End Sub
- B. Private Sub txtCreditCard_Validated _ (ByVal sender As Object, _ ByVal e As System.EventArgs) _ Handles txtCreditCardNo.Validated If ValidateCreditCardXMLService() = False then _ ErrorProvider1.SetError(txtCreditCard, "Invalid Credit Card.") End If End Sub
- C. Private Sub txtCreditCard_Validating _ (ByVal sender As Object, _ ByVal e As System.ComponentModel.CancelEventArgs) _ Handles txtCreditCardNo.Validating If ValidateCreditCardXMLService() = False then _ ErrorProvider1.GetError(txtCreditCard) End IF End Sub
- D. Private Sub txtCreditCard_Validated _ (ByVal sender As Object, _ ByVal e As System.EventArgs) _ Handles txtCreditCardNo.Validated If ValidateCreditCardXMLService() = False then _ ErrorProvider1.GetError(txtCreditCard) End If End Sub
- E. Private Sub txtCreditCard_Validating _ (ByVal sender As Object, _ ByVal e As System.ComponentModel.CancelEventArgs) _ Handles txtCreditCardNo.Validating If ValidateCreditCardXMLService() = False then _ ErrorProvider1.UpdateBinding() End If End Sub
- F. Private Sub txtCreditCard_Validated _ (ByVal sender As Object, _ ByVal e As System.EventArgs) _ Handles txtCreditCardNo.Validated If ValidateCreditCardXMLService() = False then _ ErrorProvider1.UpdateBinding() End If End Sub

Answer: B

Explanation:

We should add code for the Validating Event. If the ValidateCreditCardXMLService() function evaluates to false we should use the ErrorProvider.SetError method to set the error description string.

Question: 173. (E)

You use Visual Studio .NET to create a Windows-based application called CompanyApp, that will be distributed to your client, Interactive Kids' Museum. You add a setup project to your solution to create a distribution package. You need to ensure that your setup project will create a shortcut that will be available on your customers Programs menus. What should you do?

- A. Navigate to the User's Programs Menu folder in the File System on Target Machine hierarchy. Add the primary output from your application.
- B. Navigate to the User's Programs Menu folder in the File System on Target Machine hierarchy. Add the secondary output from your application.
- C. Navigate to the Systems Folder folder in the File System on Target Machine hierarchy. Create a shortcut to your application and move the shortcut to the User's Systems Menu folder in the same hierarchy.
- D. Navigate to the Application Folder folder in the File System on Target Machine hierarchy. Create a shortcut to your application and move the shortcut to the User's Programs Menu folder in the same hierarchy.
- E. Navigate to the Install folder in the Custom Actions hierarchy. Create a custom action that adds the primary output from your application to the User's Programs Menu folder.
- F. Navigate to the Install folder in the Custom Actions hierarchy. Create a custom action that adds a shortcut to your application's executable file to the User's Programs Menu folder.

Answer: D

Explanation:

We use the File System Editor to create a shortcut to the Application in the Programs Menu folder in the File System on Target Machine hierarchy.

Question: 174. (E)

You have created an encyclopedia application that will be used by customers in several countries. Your application formats data based on the culture in which the application is used. You have already created the default resource file, which is for English (United States). Since this application is being developed in phases, other culture-specific resource files will become available at other times throughout the year. Your application should be installed in those countries that have resource files ready. What is the most efficient way of deploying your application? (Select the best choice.)

- A. Create a separate executable for each culture.
- B. Create a separate culture for each executable.
- C. Implement <culture> attributes in your code to establish culture settings.
- D. Create a single executable and have users change their Windows Regional settings to English (United States).
- E. Create a single executable with the default culture embedded. Create separate satellite assemblies for each culture as they become available.

Answer: E

Explanation:

Resource files may contain images or text that are understood by specific cultures. The default culture resource file should be embedded in the application executable. Other culture-specific resource files should be compiled by the Assembly Linker, AL.exe, into satellite assemblies. These assemblies should be installed in unique folders under the main application folder. Creating a separate executable for each culture would be inappropriate because of the difficulty of version management. Each culture would require a separate version of your application. Creating a single executable and forcing users to use another country's settings would also be an unacceptable solution. Using attributes such as <culture> in your code will not provide the ability to add culture-specific resources.

Question: 175. (A)

You have received a sample XML file from Barkings Bank to import into a loan application application that you have created. The import routine in her application contains the following code:

```
Private Function BuildDataSet (strFileLocation as String) as DataSet Dim myFileStream as New FileStream (strFileLocation,
```

FileMode.Create) Dim dsData as New DataSet dsData.ReadXml (myFileStream, XmlReadMode.InferSchema) Return dsDataEnd Function
The XML file contains the following data:<Data> <LoanApplicant> <ApplicantName>John Doe</ApplicantName> <ApplicantTitle>Chief Software Architect</ApplicantTitle> <ApplicantCode>328</ApplicantCode> </LoanApplicant> </Data>

When you import the data, what will happen? (Select the best choice.)

- A. The data set will be empty.
- B. The data set will create a table with the name Data. No columns or rows will exist in the table.
- C. The data set will create a table with the name LoanApplicant .
- D. The data set will create a table with the name LoanApplicant and three columns named ApplicantName, ApplicantTitle, and ApplicantCode. The table will contain one row of data.
- E. The data set will create a table with the name Data and one column named LoanApplicant. The table will contain three rows of data.

Answer: D

Explanation:

If the XmlReadMode parameter is set to InferSchema when the ReadXml method of a DataSet object is used, then the data set will create a data structure based on an existing schema. If no schema exists, then the data set will base its data structure on the elements and attributes of the XML data. An element in an XML document that has child elements is inferred as a table if the child elements themselves are inferred as columns. Elements with no attributes or child elements are inferred as columns. If the XmlReadMode parameter were set to IgnoreSchema, then no data would have been placed in the data set because there is no schema.

Question: 176. (D)

You are creating the load and save component of ES Word application. Which of the following exception should you handle during file access? (Select the best choice.)

- A. ConfigurationException
- B. SynchronizationLockException
- C. PathTooLongException
- D. FormatException

Answer: C

Explanation:

The PathTooLongException is thrown when the file or path name that is being accessed is longer than the maximum path length permitted by the operating system. The ConfigurationException class is thrown when an invalid setting is encountered in a configuration file. The FormatException class is thrown when a method parameter is not formatted properly. The SynchronizationLockException class is thrown when a synchronized method is invoked from unsynchronized code.

Question: 177. (E)

You are in the progress of migrating Visual Basic 6.0 to .NET components for ES Inc. However, some Net components will still be used in applications developed in Visual Basic 6.0. Which of the following tools can you use to prepare the .NET component for use with Visual Basic 6.0 applications? (Select the best choice.)

- A. SOAPSUDS.exe
- B. RegSvr32.exe
- C. Wsdll.exe
- D. ILDASM.exe

E. RegAsm.exe

Answer: E

Explanation:

You can use the RegAsm.exe utility to prepare the .NET component for use with Visual Basic 6.0 applications; this tool is used to export and register a type library from a .NET assembly. The RegSvr32.exe utility is used to register COM components. The Wsdll.exe utility is used to create a Web Services Description Language (WSDL) file for your component. The SOAPSUDS.exe tool helps you to build Web service clients that use the remoting technique. The ILDASM.exe tool is the Microsoft Intermediate Language Disassembler.

Question: 178. (B)

You are planning to produce a native image from an assembly that you created by using the Native Image Generator, Ngen.exe, tool.

Which of the following is false about the native image created by Ngen.exe? (Select all that apply.)

- A. The native image can be used on computers with different processor types.
- B. The just-in-time (JIT) compiler will convert the native image into native code.
- C. Applications that use the native image will start faster.
- D. The native image cannot be used in debug mode.

Answer: A, B, D

Explanation:

The Native Image Generator tool, Ngen.exe, included with the .NET Framework, can create precompiled assemblies that load faster because the native image generated by Ngen.exe has already performed much of the work that the JIT compiler would have to do.

Question: 179. (F)

You use Visual .NET to develop a Windows-based application whose project name is CompanySkiBookings for TesESing Ski to handle ski bookings. You create an application configuration file that will be installed on bookings executives' client computer along with CompanySkiBookings.

You must ensure that the settings in the application configuration file are applied when CompanySkiBookings is executed. What should you do?

- A. Name the configuration file CompanySkiBookings.exe.config and copy it to the Windows\System32 folder.
- B. Name the configuration file CompanySkiBookings.config and copy it to the Windows\System32 folder.
- C. Name the configuration file CompanySkiBookings.exe.config and copy it to the application folder.
- D. Name the configuration file CompanySkiBookings.config and copy it to the application folder.
- E. Name the configuration file CompanySkiBookings.exe.config and copy it to the global assembly cache.

Answer: C

Explanation:

The configuration file for an application hosted by the executable host is in the same directory as the application. The name of the configuration file is the name of the application with a .config extension. In this scenario the configuration file should be named CompanyMgmt.exe.config and be placed in the application folder.

Reference: .NET Framework Developer's Guide, Application Configuration Files

Question: 180. (B)

You use Visual Basic .NET to develop a Windows-based application for CompanyFirst Bank. You plan to reuse a procedure written in Visual Basic 6.0. The procedure includes the following array declaration to store referees of loan applicants:

`Dim LoanApplicantReferees(1 to 5) As String` You copy and paste the array declaration from the Visual Basic 6.0 project into the new Visual Basic .NET project. Now you must ensure that the `LoanApplicantReferees` array will compile in the Visual Basic .NET application. What should you do?

- A. Include the `Option Base 1` statement in the Declaration section of the module.
- B. Include the `Option Base 0` statement in the Declaration section of the module.
- C. Include the `Option Base 10` statement in the Declaration section of the module.
- D. Replace the `Dim` statement with the following code segment: `Dim LoanApplicantReferees(1 to 9) As String`
- E. Replace the `Dim` statement with the following code segment: `Dim LoanApplicantReferees(0 to 9) As String`
- F. Replace the `Dim` statement with the following code segment: `Dim LoanApplicantReferees(9) As String`
- G. After the `Dim` statement, add the following code segment: `ReDim LoanApplicantReferees(0 to 9) As String`
- H. After the `Dim` statement, add the following code segment: `ReDim LoanApplicantReferees(9) As String`

Answer: F

Explanation:

Array lower bounds are supported in Visual Basic 6.0, but not in Visual Basic .Net.

Question: 181. (F)

You have been contracted to develop a highly accessible Visual Basic program that will be used by visitors at TesESing Museum of Arts. As each text box receives focus, the name of the text box should be spoken. While testing the program, you realize that, on one form, the names of the Artist text box is not spoken aloud as it receives focus. Which of the following is most likely the cause of this behavior? (Select the best choice.)

- A. The Accessibility Client software is not installed
- B. Windows XP is not configured to use the Accessibility Client software
- C. The Accessibility Client software is incorrectly configured.
- D. The `Name` property of the Artist text box is improperly set.
- E. The `Text` property of the Artist text box is improperly set.
- F. The soundcard is improperly configured
- G. The `AccessibleName` property of the Artist text box is improperly set.
- H. The microphone is not functioning well

Answer: G

Explanation:

The most likely cause of the error is that the `AccessibleName` property of the Artist text box is improperly set. The `AccessibleName` property of .NET controls contains the name of the control that is reported to the Accessibility Client software. If the Accessibility Client software were incorrectly configured, then the system would not function properly for the other controls on the form. The `Text` property holds the data that is contained in the control. Neither the `Text` property nor the `Name` property has an effect on the function of Accessibility Client software.

Question: 182. (F)

You are performing tests on a form. A method, `FindCourseThatIsFull()` is not returning the right values. You want to see the value of

all of the form's properties. Which of the following windows should you use to accomplish this task? (Select the best choice.)

- A. Locals
- B. Me
- C. Autos
- D. Memory

Answer: B

Explanation:

You should use the Me window; the Me window displays the properties of the currently executing object and the values of those properties. The Memory window displays a raw data dump of a section of memory. The Autos window displays all variables and objects referenced on the current and previous source code lines. The Locals window displays the value of all local variables and objects.

Question: 183. (G)

You are developing a Windows Form application for ESSuperBus Inc. The IT Security Executive requests that the application's trace information should be written to an event log. You have created an EventLogTraceListener object in code that will redirect output to the event log. What method should you implement to write text to the event log? (Select the best choice.)

- A. Trace.WriteLine
- B. TraceListener.WriteLine
- C. Trace.ToString
- D. TextWriter.Write

Answer: A

Explanation:

The WriteLine method of the Trace class writes a string to the event log specified by the EventLog property of an EventLogTraceListener object. The ToString method returns a string representation of the Trace object. The WriteLine method of the TraceListener class places an indent, or tab, into the listener. The TextWriter class is used to write characters to a file; therefore, it does not meet the requirement of the scenario.

Question: 184. (B)

You have developed a new .NET component. Sarah wants to use your component in an application that she has written in Visual Basic 6.0.

Sarah has copied the .NET component into the application folder that contains her Visual Basic 6.0 application. What else should Sarah do? (Select the best choice.)

- A. You should declare all methods in your .NET component as Private.
- B. You should add a public method named COM_Interop to the .NET component. The COM_Interop method should return the Class ID of the component.
- C. Arlene should install the .NET component into her \Windows\System32 folder.
- D. Arlene should register the .NET component for use by COM using the RegAsm.exe utility.

Answer: D

Explanation:

To enable the .NET component to be used by COM, Arlene should copy the .NET component into the application folder, and then she should register the component with RegAsm.exe to expose its interfaces to COM. When a COM application calls a method in a .NET

application, the common language runtime, mscoree.dll, attempts to find the component in the Global Assembly Cache or in the application's folder. The RegAsm.exe utility creates entries in the Registry that make your component accessible to COM applications. None of the other choices are correct. You do not have to add any special methods to the .NET assembly code to enable COM interoperability. All methods that should be exposed to COM applications must be declared as Public.

Question: 185. (A)

The Harvey School of Computing has hired you to create a course registration application. It will query a Microsoft SQL Server database and write the results to an XML file. A proprietary accounting program on a AS400 Mainframe will then import the XML file. It is important that the data in the XML file be imported so that the data types of each field are specified. Your project manager wants to build the XML file from a data set named dsMain in a way that is most efficient? (Select the best choice.)

- A. Dim fsMain as New SystemIO.FileStream ("export.xml", System.IO.FileMode.Create) dsMain.GetXmlSchema fsMain.Write dsMain.ToText
- B. Do Until dsMain.EOF dsMain.WriteXML(dsMain) dsMain.MoveNext Loop
- C. Dim fsMain as New SystemIO.FileStream ("export.xml", System.IO.FileMode.Create) dsMain.WriteXML(fsMain, XmlWriteMode.WriteSchema)
- D. dsMain.WriteXML("export.xml", XmlWriteMode.IgnoreSchema)

Answer: C

Explanation:

The WriteXML method is used to save data from a data set into an XML file. A schema provides data type information for XML files. When the XMLWriteMode parameter of the WriteXML method is set to WriteSchema, the data and the schema are saved to the same file. Software that is able to consume XML documents and their schema will be able to define the data types of each field properly, based on the information in the schema.

Question: 186. (B)

You use Visual Studio .NET to develop a Windows-based application named FabricsCo Customer Relationship Manager (FCRM). ARA contains a class named Client. The client class is defined by the following code segment:

```
Namespace FabricsCo.BusinessLayer Public Class Customer Public Function GetPhone(customerID As Integer) As String 'More code goes here. End Function 'Other functions go here. End Class End Namespace
```

The Customer class is invoked from FCRM by using the following code segment:

```
Public Class CustomerForm Inherits System.Windows.Forms.Form Private Sub SetPhoneNumber(ByVal PostalCode As String) Dim customer as New Customer() TextBox1.Text = customer.GetPhone(postalCode) End Sub End Class
```

When you try to build your project, you receive the following error message: "Type 'Customer' is not defined." What should you do? (Select the best answer.)

- A. Fully qualify the Customer class with the FabricsCo.BusinessLayer.class namespace.
- B. Fully qualify the Customer class with FCRM namespace.
- C. Fully qualify the Customer class with BusinessLayer namespace.
- D. Import the FabricsCo.BusinessLayer namespace in the CustomerForm class.
- E. Inherit the FabricsCo.BusinessLayer namespace in the CustomerForm class.
- F. Declare the customer object variable by using the WithEvents keyword.
- G. Declare the customer object variable by using the Implements keyword.

Answer: D

Explanation:

We could import the FabricsCo.BusinessLayer namespace by creating an alias: Imports customer = FabricsCo.BusinessLayer.Customer

Question: 187. (B)

You develop a Windows-based application that includes the following code segment. (Line numbers are included for reference only.)

```
01 Public Sub CreditCard_Validating (ByVal sender As _ 02 Object, ByVal e As _ 03 System.ComponentModel.CancelEventArgs) 04  
Handles CreditCard.Validating 05 If ValidCreditCard() = False Then 06 'Insert new code. 07 End If 08 End Sub
```

You must ensure that users cannot move control focus away from textCreditCard if ValidCreditCard returns a value of False. You will add the required code on line 6. Which code segment should you use?

- A. sender = textName
- B. CreditCard.AcceptsTab = False
- C. e.Cancel = True
- D. CreditCard.CausesValidation = False

Answer: C Explanation:

We simply use cancel to cancel the validation of the control.

Question: 188. (G)

You use Visual Studio .NET to develop a Windows-based application for Bank Managers to access accounting and loan information. Normally, only accounting executives have rights to view and modify accounting information. Loans executive officers have similar rights to loans data. You implement security by using the security classes of the .NET Framework. Your application includes the following procedure. (Line numbers are included for reference only)

```
1      Public Sub ApproveVacation(ByVal user 1 As String, -  
2      ByVal role1 As string, ByVal, user 2 As String, _  
3      ByVal role2 As String)  
4      Dim PrincipalPerm1 As _  
5      New PrincipalPermission(LoanExec, role1)  
6      Dim principalPerm2 As _  
7      New PrincipalPermission(AccountingExec, role2)  
8      'Insert new code.  
9      'Additional procedure code goes here  
10     End Sub
```

You must ensure that both the user has both LoanExec and AccountingExec security roles. Which code segment should you insert on line 8?

- A. principalPerm1.IsUnrestricted
- B. principalPerm2.IsUnrestricted
- C. principalPerm1.IsSubSetOf(principalPerm2)
- D. principalPerm1.Intersect(principalPerm2).Demand()
- E. principalPerm1.Union(principalPerm2).Demand()

Answer: D**Explanation:**

Intersect will return us security roles of both.

Question: 189. (B)

You are creating a localized version of a Windows Form Dictionary application named ESDictionary. Primary users of ESDictionary speak a language that prints text from right to left. You must meet their needs and apply proper format when the localized Windows Form runs. Operational requirements states that you must also ensure that ESDictionary is easy to update and maintain.

What should you do?

- A. Set the RightToLeft property of each control on the form to Yes.
- B. Set the Language property of the form to the appropriate language.
- C. Set the Localizable property of the form to True.
- D. Set the RightToLeft property of the form to Yes.

Answer: D

Explanation:

The RightToLeft property is used for international applications where the language is written from right to left

Question: 190. (C)

Which of the following methods are not methods of the OleDbCommand class? (Select all choices that are correct.)

- A. CreateParameter
- B. Update
- C. BeginTransaction
- D. Fill
- E. ExecuteScalar
- F. Close
- G. Cancel

Answer: B, C, D, F

Explanation:

The Cancel method attempts to stop a command from running. The ExecuteScalar method returns a single value, typically from a stored procedure or query, such as the sum, average or count of a set of data. The CreateParameter method instantiates a new parameter object. The Fill and Update methods are methods of the DataAdapter class. The Close, Update and BeginTransaction methods are methods of the Connection class.

Question: 191. (E)

You are a .Net programmer for TesESing. Your .Net application is about to approach the stabilizing phase. Your team leader instructs you to perform the following:

All users in your company must use the same version of the software

You must minimize the time need to install the software when new setup programs are released. How can you most easily accomplish these goals? (Select the best choice.)

Install the application on the network. Create a client install project that will place a shortcut to the network application on each user's desktop.

Create a Merge Module type setup file, and place it on the network. Place a shortcut to the Merge Module on each user's desktop.

Send to your users an e-mail message that includes the setup files each time that you rebuild the file.

Create a Web setup file, and place it on the corporate intranet. Send an e-mail message to your users whenever you update the setup file so that they can update the installation on their local computers.

Answer: A

Explanation:

To simplify version control for your .NET application and to minimize installation time for the application, you should install the .NET application to the network and create a client install project that will place a shortcut to the application on each user's desktop. By placing the executable files on the network, you ensure that all users are running the same version of the software. In addition, you only have to install the application once each time a new version is released. You should not rely on your users to install the application updates because the users might not install the most recent version. Merge modules can only be used from within other setup applications; therefore, merge modules cannot be executed from a shortcut.

Question: 192. (B)

You use Visual Studio .NET to create a Windows Form application used by hotel executives to book flights for hotel customers. Your application contains classes to calculate airport taxes based on regions and cities. These classes are defined in the following code segment. (Line numbers are included for reference only.)

```
01 Public Class Region
02 Public Overridable Sub CalculateAirportTax()
03 'Code to calculate tax goes here.
04 End Sub
05 End Class
06 Public Class City
07 Inherits Region
08 Public Overrides Sub CalculateAirportTax()
09 'Insert new code.
10 End Sub
11 End Class
```

You need to add code to the CalculateAirportTax method of the City class to call the CalculateAirportTax method of the Region class. Which code segment should you add on line 9?

- A. MyBase.CalculateAirportTax()
- B. CalculateAirportTax()
- C. Me.CalculateAirportTax()
- D. MyClass.CalculateAirportTax()

Answer: A

Explanation:

The MyBase keyword to call methods in a base class when overriding methods in a derived class.

Question: 193. (A)

You use Visual Studio .NET to create a component ESSchedulingComponent that will be shared by two client applications. Your superior, Bill, gives you these requirements:

He plans to deploy new version of ESSchedulingComponent.

Not all of the new versions will be compatible with both client applications.

When ESSchedulingComponent is deployed you must ensure that you can upgrade the ESSchedulingComponent for a single client application.

You must also minimize the need for configuration changes.

What are two possible ways to achieve your goal? (Each correct answer presents a complete solution. Choose two)

- A. Create a strong name of ESSchedulingComponent and specify a version number. Compile each client application and bind it to ESSchedulingComponent. Deploy each client application to its own folder. When you deploy a new version of ESSchedulingComponent, increment its version number.
- B. Deploy each client application to its own folder. Deploy ESSchedulingComponent to its own folder. Register ESSchedulingComponent by using RegSvr32 with the /s option.
- C. Deploy each client application to its own folder. Deploy a separate copy of ESSchedulingComponent to each client application folder. When you deploy a new version of ESSchedulingComponent, replace the older version only if the new version remains compatible with the client application in the same folder.

- D. Compile the client applications with reference to ESSchedulingComponent. Deploy both client applications and ESSchedulingComponent to a single folder. When you deploy a new version of ESSchedulingComponent, increment its version number.
- E. Create a strong name of ESSchedulingComponent and specify a version number. Compile each client application and bind it to ESSchedulingComponent. Deploy ESSchedulingComponent to the global assembly cache on the client computer. Deploy each client application to its own folder. When you deploy a new version of ESSchedulingComponent, increment its version number.

Answer: C, E

Explanation:

C: We keep two separate copies of the shared component. And we only replace the shared copy of the component if compatibility is still maintained.

E: You can install multiple versions of the same assembly to the Global Assembly Cache, and applications can locate and use the appropriate version.

Question: 194. (C)

You are working on a Web Application at Silva Inc. You discover that the stored procedure's parameters have been changed. The database administrator is on medical leave. Which of the following methods should you use to determine which stored procedures have parameters that no longer match the parameters that you have already established in your code? (Select the best choice.)

- A. SqlDataReader.GetName
- B. DataAdapter.FillSchema
- C. SqlCommandBuilder.RefreshSchema
- D. SqlCommandBuilder.DeriveParameters

Answer: D

Explanation:

The DeriveParameters method of the SqlCommandBuilder class allows you to retrieve the parameters of stored procedures. You could compare the parameters that are returned by DeriveParameters against the parameters in existing code to see if they match. The GetName method of the SqlDataReader class returns the name of a column at a specified index. The RefreshSchema method is used when the underlying query of a SqlCommandBuilder object changes in order to update the database schema information.

Question: 195. (F)

You use Visual Studio .NET to develop a Microsoft Windows-based application. Your application contains a form named CustomerForm to enter time sheet entries for a law firm. At design time you set the DataBindings properties of each TextBox control to the appropriate column in the DataTable object of CustomerDataSet. When the application runs, users must be able to edit the information displayed in the text boxes. All user changes must be saved to the appropriate database when saveButton is executed. The event handler for btnSave includes the following code segment:

```
DataAdapter.Update(CustomerDataSet)
```

Your application fails to work correctly. BtnSave fails to save any values edited in the text boxes. You need to correct this problem. What should your application do?

- A. Call the InsertCommand method of the DataAdapter.
- B. Before calling the Update method, ensure that a row position change occurs in CustomerDataSet.
- C. Reestablish the database connection by calling the Open method of the Connection.
- D. CALL THE Update method of the DataAdapter and pass in the Connection.

Answer: D

Explanation:

We must specify the Data Source as well. The Data Source is specified with the SqlConnection object. We should issue the following command:

Question: 196. (A)

You are writing code for a Windows Form HR application that will allow users to save original and edited data on employees. You use data sets to achieve this. You will be using the WriteXml method to write the XML. The WriteXml method accepts an XmlWriteMode parameter to determine the XML format. Which member of the XmlWriteMode enumeration should you select? (Select the best choice.)

- A. The default member
- B. WriteSchema
- C. DiffGram
- D. IgnoreSchema

Answer: C

Explanation:

The XmlWriteMode parameter of the XmlWriter class, when set to DiffGram, creates a DiffGram XML document from a data set. The Diffgram XML document format stores the original and current data in the same XML document. Setting the XmlWriteMode parameter to IgnoreSchema writes the contents of the data set to XML without including a schema. Specifying WriteSchema will write both the data and the schema from a DataSet object. The default member of the XmlWriteMode enumeration is WriteSchema.

Question: 197. (B)

You are contracted to develop a Customer Relationship Management system for ESWare Inc. You have created a stored procedure named sp_GetYTDRenues that returns the Year to Date revenue as an output parameter. This total must be produced in a string. You write the following code to call sp_GetYTDRenues:

```
'Other code omitted '... '... cmd.CommandType = CommandType.StoredProcedure Dim  
parm As SqlParameter = cmd.Parameters.Add( __ "@YTDRenue", SqlDbType.Int)  
parm.Direction = ParameterDirection.Output cnn.Open() cmd.ExecuteNonQuery()
```

Now you must write additional code to access the output parameter. Which code segment should you use?

- A. strResult = "Total is: " & _
a. cmd.Parameters("@Output").Value.ToString()
- B. strResult = "Total is: " & _
a. cmd.Parameters("@Output").ToString()
- C. strResult = "Total is: " & _
a. cmd.Parameters("@YTDRenue").ToString()
- D. strResult = "Total is: " & _
a. cmd.Parameters("@YTDRenue").Value.ToString()

Answer: D

Explanation:

The @ YTDRenue parameter is declared as an output parameter with SQL Server data type INT. We use the Value property of the SqlParameter class to retrieve the value of this parameter. We must also convert the INT value to a string value with the ToString

method. We then supply this string to the MessageBox.Show method.

Question: 198. (G)

You use Visual Studio .NET to develop applications for your client, School of Computer Arts to manage access to Student data. You create the following interfaces:

```
Public Interface ICourseInstructors Property SocialSecurityNo() As Double End Interface Public Interface IAssociateProfessors  
Inherits ICourseInstructors Property AnnualBonus() As Double End Interface
```

The ICourseInstructors interface represents a generic Course Instructor. All actual employees in your company should be represented by interfaces that are derived from ICourseInstructors. Now you need to create a class named AssociateProfessors to represent Associate Professors in the School of Computer Arts. You want to create this class by using the minimum amount of code. You write the following code:

```
Public Class AssociateProfessors End class
```

Which additional code segment or segments should you include in AssociateProfessors? (Choose all that apply)

- A. Implements IAssociateProfessors
- B. Implements ICourseInstructors, IAssociateProfessors
- C. Inherits IAssociateProfessors
- D. Inherits ICourseInstructors, IAssociateProfessors
- E. Property SocialSecurityNo() As Double Implements IAssociateProfessors.SocialSecurityNo
- F. Property AnnualBonus() As Double Implements _ IAssociateProfessors.AnnualBonus

Answer: A, E, F

Explanation:

A: A class can implement an Interface. The Manager class should implement the IAssociateProfessors interface. E, F: The properties that are defined in the Interface must be implemented in a Class.

Question: 199. (C)

You are developing a Windows-based application called ESRawMaterialsApp to integrate with your suppliers using XML. To maintain data integrity, ESRawMaterialsApp must parse the incoming XML data files from your suppliers to ensure that they conform to your schema. What should you do?

- A. Implement a DataSet object and code an event handler to process its events.
- B. Implement a DataSet object and set its Enforce Constraints property to True.
- C. Use XPathDocument to parse and correct the incoming XML data
- D. Use XmlDocument to parse and correct the incoming XML data
- E. Implement an XmlValidatingReader object and examine its ReadState property after reading the XML data file.
- F. Implement an XmlValidatingReader object and code an event handler to process its events.

Answer: F

Explanation:

The XmlValidatingReader class, an implementation of the XmlReader class, provides support for XML validation. The ValidationEventHandler event is used to set an event handler for receiving information about schema validation errors.

Question: 200. (C)

You use Visual Studio .NET to develop a Windows-based application called ESVerifyRequirements for the School of Renaissance History. Your application will display student information from a Microsoft SQL Server database that meet a specific criteria to be

enrolled into courses in the following semester. The student information will be displayed on a Windows Form in a data grid named DataGrid1. DataGrid1 is bound to a DataView object. The Windows Form includes a button control named btnDisplayEligible. When Course Administrators click this button, DataGrid1 must display only students whose CriteriaMet value is set to True. How should you implement this functionality?

- A. Set the Filter property of the DataView object to "CriteriaMet = True".
- B. Set the RowStateFilter property of the DataView object to "CriteriaMet = True".
- C. Set the RowStateFilter property of the DataGrid object to "CriteriaMet = True".
- D. Set the Sort property of the DataView object to "CriteriaMet = True".
- E. Set the ApplyDefaultSort property of the DataView object to True.
- F. Set the RowFilter property of the DataView object to "CriteriaMet = True".

Answer: A

Explanation:

Using the RowFilter property of a data view, you can filter records in a data table to make available only records you want to work with.

Question: 201. (A)

You are the .Net Consultant for ESBank. ESBank wants to allow existing users of their ATM machines to apply for Internet Banking through their ATM machines. To do this, you use Visual Studio .NET to create a component named ValidateValidATMUser to verify if the user is a valid ATM customer. This component includes a method named AcceptValidateValidATMUser, which tries to process new user ValidateValidATMUsers for services. AcceptValidateValidATMUser calls a private function named Validate. You must ensure that any exceptions encountered by Validate are bubbled up to the parent form of ValidateValidATMUser. The parent form will then be responsible for handling the exceptions. You want to accomplish this goal by writing the minimum amount of code. What should you do?

- A. Use the following code segment in AcceptValidateValidATMUser: Me.Validate()
- B. Use the following code segment in AcceptValidateValidATMUser: Try Me.Validate() Catch ex As Exception Throw ex End Try
- C. Use the following code segment in AcceptValidateValidATMUser: Try Me.Validate() Catch ex As Exception Throw new Exception ("Exception in AcceptValidateValidATMUser", ex) End Try
- D. Create a customer Exception class named ValidateValidATMUserException by the following code segment: Public Class ValidateValidATMUserException Inherits System.ApplicationException Public Sub New() End Sub Public Sub New (message As String) MyBase.New(message) End Sub Public Sub New (message As String, inner As Exception) MyBase.New(message, inner) End Sub End class In addition, use the following code segment in AcceptValidateValidATMUser: Try Me.Validate() Catch ex As Exception Throw new ValidateValidATMUserException("Exception in _ AcceptValidateValidATMUser", ex) End Try

Answer: B

Explanation:

The unhandled exception automatically will be thrown to the client application. This solution meets the requirement that the least amount of code should be used. We must throw the exception as it is.

Question: 202. (C)

You have been asked to build a Billing application for ESPowerHouse to bill its customers. Your application must facilitate auditing. To do this, you create a form in your application that will allow users to modify data in the ElectricityBill table. You have created a DataSet object named dsElectricityBill. You perform these operations:

The data source of dsElectricityBill is ElectricityBill.
Your application will have two grids, gridEdit and gridOriginal.
The data source of gridEdit will be dsElectricityBill.

Users of your application will make changes to the data in dsElectricityBill through gridEdit.

When rows are modified in gridEdit, gridOriginal will display the original data of the modified rows. gridOriginal will display only rows that have been modified.

The data source of gridOriginal will be a DataView object named dvOriginal.

Which of the following actions should you perform to provide this functionality in your application? (Each choice presents a part of the solution.) (Select 2 choices.)

- A. Create dvOriginal with a clone of the dsElectricityBill data set.
- B. Set the AllowPaging property of gridEdit to true.
- C. Create dvOriginal with the dsElectricityBill data set.
- D. Set the ViewState property of gridOriginal to DataRowState.ModifiedOriginal.
- E. Set the RowStateFilter property of dvOriginal to DataRowState.ModifiedOriginal.

Answer: C, E

Explanation:

In this scenario, you want to enable one grid, gridOriginal, to automatically detect data changes that occur in the other grid, gridEdit. To accomplish this, gridOriginal should use a DataView object that is created with the same DataSet used by gridEdit. Because the RowStateFilter property filters the rows that are available in a DataView object, you should set the RowStateFilter to DataRowState.ModifiedOriginal. Performing this action ensures that only the rows that have been modified will be displayed. The original data will be displayed in those rows. If the RowStateFilter property were set to DataRowState.ModifiedCurrent, then the current data of the modified rows would be displayed. The Clone method of a DataSet object creates a duplicate of the data set, but the clone contains no data. The ViewState property of the DataGrid Web control is used to maintain the grid's data between page requests and would not be used in the DataGrid control used on Windows forms. The AllowPaging property, when set to true, allows a data grid to display data in segments.

Question: 203. (D)

You are debugging a financial application for ESGreenBack Inc. You notice that when blnOverdue changes the total charge is incorrect. You want execution to pause at a breakpoint if the value of a variable has changed. Which of the following actions should you perform to stop execution? (Select the best choice.)

- A. Set an assertion.
- B. Set a watch for the variable.
- C. Set a watch for the method which contains the variable.
- D. Use a Stop statement.
- E. Stop execution of the code immediately.
- F. Set a breakpoint with a condition.

Answer: F

Explanation:

Breakpoints are used to break execution while code is running in the Visual Studio .NET IDE. You can set conditions on breakpoints so that execution will pause only if a given condition is met. One of the conditions that you can set is whether a variable's value has changed. If the value has changed since the last time that the breakpoint was encountered, execution will stop on the line of code with the breakpoint that contains the variable. Setting a watch allows you to view the value of a variable as code executes.

Question: 204. (G)

You are developing a secure Time Sheet Entry application for ESFirm. The systems analyst requires you to implement a proprietary authentication system that passes a different identification number for each of the user roles identified in the firm. Which of the following objects should you use? (Select the best choice.)

- A. Custom Identity

- B. Windows Identity
- C. Forms Identity
- D. Generic Identity

Answer: A

Explanation:

Identity objects represent the user on whose behalf the code is running. A Custom Identity is a user-defined object that implements the `IIdentity` interface. Because this object is user-defined, it can contain user-specific data that the other types of identities are not equipped to handle. Windows Identities represent local or domain user accounts. Forms Identities are used in the implementation of form-based authentication with ASP.NET. Generic Identities represent generic users and can be used when the other types of identities are inappropriate.

Question: 205. (B)

You have created two classes for a HR application. It uses a base class named `ESEmployee`, and a `ESExecutive` class that is inherited from `ESEmployee`. The `CalculateSocialSecContribution` method of the `ESExecutive` class shadows the `CalculateSocialSecContribution` method in the `ESEmployee` base class. When you start to use these classes in test code, you declare a reference variable by using the following line of code:

`Dim TestESEmployee as ESEmployee = New ESExecutive()` What happens when you run the test and call the `TestESEmployee.CalculateSocialSecContribution` method? (Select the best choice.)

- A. The `CalculateSocialSecContribution` method of the `ESEmployee` class is called.
- B. The method call raises an error in the `CalculateSocialSecContribution` method of the `ESExecutive` class.
- C. The `CalculateSocialSecContribution` method of the `ESExecutive` class is called.
- D. The method call raises an error in the `CalculateSocialSecContribution` method of the `ESEmployee` class.

Answer: A

Explanation:

When you call the `TestESEmployee.CalculateSocialSecContribution` method, the `CalculateSocialSecContribution` method of the `ESEmployee` class executes. When a shadowed method of a subclass is called from a reference variable of the type of the base class, the method of the base class is used. This type of method call does not cause an error in either class.

Question: 206.(G)

You are creating a Windows Form application that will be used by employees in Company to request for leave. It reads data from files on a network share at Company's HR department. You notice that sometimes exceptions are thrown. You need to check that the network share is available before writing or reading files from the share. What should you do? (Select the best choice.)

- A. Iterate through the array that is returned by the `GetLogicalDrives` method of a `Directory` object.
- B. Check the number of bytes returned by the `Length` property of a `FileStream` object.
- C. Verify the value returned by the `Directory` property of a `FileInfo` object.
- D. Call the `Exists` method of a `Directory` object and verify that it returns `True`.

Answer: D

Explanation:

The `Exists` method of the `Directory` class returns `True` if the specified directory or drive is found. By verifying the return value, you can determine whether an attempt should be made to access files at that location. The `Length` property of the `FileStream` class

returns the size of a file measured in bytes. The GetLogicalDrives method of the Directory class returns a string array of all logical drives on a computer. Iterating through the array would not help you to determine whether a network share is valid. The Directory property of the FileInfo class returns a Directory object, but does not determine whether a share is valid.

Question: 207. (G)

You are developing a component to handle common security operations named SecureES. You want to provide your programmers with the ability to generate their own classes, but you do not want them to be able to extend the default classes. To meet these requirements, you create a class named SecureESClass that will serve as an abstract base class for all classes. You then base several other classes with varying access levels on SecureESClass to provide the default classes. Which of the following actions must you perform to provide the desired functionality? (Select all choices that are correct.)

- A. Declare the subclasses of SecureESClass with the MustInherit keyword.
- B. Declare the SecureESClass class with the MustInherit keyword.
- C. Declare all methods of SecureESClass with the MustOverride keyword.
- D. Declare all methods of the subclasses of SecureESClass with the MustOverride keyword.
- E. Declare the subclasses of SecureESClass with the NotInheritable keyword.
- F. Declare the SecureESClass class with the NotInheritable keyword.

Answer: B, C, E

Explanation:

To allow your programmers to generate their own classes without extending the default class, you should declare the SecureESClass class with the MustInherit keyword, declare the subclasses of SecureESClass with the NotInheritable keyword, and declare all methods of SecureESClass with the MustOverride keyword. By declaring the SecureESClass class with the MustInherit keyword and declaring all methods of the SecureESClass class with the MustOverride keyword, you will establish SecureESClass as an abstract base class. An abstract base class provides no implementation, but it allows other classes to inherit from and implement its interface. If the SecureESClass class were declared as NotInheritable, then the class would be prevented from being subclassed. Declaring subclasses of the SecureESClass class as NotInheritable allows you to distribute these classes with the confidence that no other classes can inherit from them. Methods of a NotInheritable class cannot be declared with the MustOverride attribute. Doing so will result in an error.

Question: 208. (B)

You need to customize the .NET IDE toolbox for some programmers who require highaccessibility. Which of the following class attributes should you use to disable a custom control's icon in the .NET IDE toolbox? (Select the best choice.)

- A. ToolboxBitmapAttribute
- B. ToolboxItemAttribute
- C. ToolboxItemFilterAttribute
- D. ToolboxDataAttribute

Answer: C

Explanation:

The ToolboxItemFilterAttribute uses a filter string and filter type to determine when to enable or disable an item in the toolbox. The ToolboxBitmapAttribute determines the image that will appear in a toolbox for a component. The ToolboxDataAttribute determines the default tag that is generated by the environment that is hosting the custom control. The ToolboxItemAttribute represents an attribute of the toolbox item and provides the means to set certain properties, such as the type of toolbox item.

Question: 209. (D)

You have just been given a job at ESSoftware. You need to debug an existing .NET application on a computer. You cannot find the documentation for the application. When you attempt to run the application, you receive an error message stating that one of the assemblies used by the application does not have the required permissions to run. Which of the following tools should you use to set the permissions correctly? (Select the best choice.)

- A. Permview.exe
- B. Certmgr.exe
- C. Secutil.exe
- D. Caspol.exe

Answer: D

Explanation:

You should use the Code Access Security Policy tool, which is also known as Caspol.exe, to set the permissions correctly. Caspol.exe allows you to view and modify security settings for user-, machine- and enterprise-level code. Secutil.exe extracts strong name public key information or Authenticode certificates in a format that can be incorporated into source code. PermView.exe, which is also known as the Permissions Viewing utility, can view the security settings required for the assembly, but cannot change the existing settings. Certmgr.exe manages X.509 certificates.

Question: 210. (E)

You have completed a Ticketing Application for ESTransco. Your colleague, Sharon is suggesting to use Microsoft Installer 2.0. You disagree with Sharon. You suggest XCOPY deployment. How can you justify XCOPY deployment? (Select the best choice.)

- A. when installing an application to a client workstation that does not have the .NET Framework installed
- B. when installing an application that contains a private assembly to a server on an intranet
- C. when installing an application that requires settings to be created in the Machine.config file
- D. when installing a strong-named assembly into the GAC

Answer: B

Explanation:

One of the advantages of .NET applications is that they are self-describing and do not require registry settings. In many instances, installing an application is as simple as using XCOPY. In some situations, however, the use of an installer such as Microsoft Installer 2.0 is required. An installer would be necessary to place settings in a Machine.config file during installation, to install a strong-named assembly in the global assembly cache (GAC) or to install the .NET Framework files.

Question: 211. (E)

Your company has employed you to help them migrate their systems to .Net systems to take advantage of XML processing. They have started to manually convert some text files to XML files. You need to validate the XML documents with an inline schema that you have created. What should you use? (Select the best choice.)

- A. XmlSchema
- B. XmlUrlResolver
- C. XmlReader
- D. XmlValidatingReader

Answer: D

Explanation:

The XmlValidatingReader class can be used to validate XML with both inline and external schema. Validation ensures that the data in the XML document is of the same type or structure as defined in a schema. For example, a schema might define the format of a telephone number element that all telephone number elements in an XML document must adhere to.

Question: 212. (G)

ESWholesale deals with many suppliers globally. They have started using XML as a means to obtain product data from suppliers. You

need to load XML documents from a remote location. Your operational requirements include security. What should you use? (Select the best choice.)

- A. XmlSchema
- B. XmlUrlResolver
- C. XmlReader
- D. XmlValidatingReader

Answer: B

Explanation:

The XmlUrlResolver class is used to load XML documents that require security credentials to access.

Question: 213. (D)

You have just finished testing your application, ESSecureSource. You find that the loading of the initial form is very slow. You decide to use the Native Image Generator, Ngen.exe, tool. Why should use Ngen.exe? (Select the best choice.)

- A. The native image can be used on computers with different processor types.
- B. The just-in-time (JIT) compiler will convert the native image into native code.
- C. Applications that use the native image will start faster.
- D. The native image cannot be used in debug mode.

Answer: C

Explanation:

The Native Image Generator tool, Ngen.exe, included with the .NET Framework, can create precompiled assemblies that load faster because the native image generated by Ngen.exe has already performed much of the work that the JIT compiler would have to do. The common language runtime will attempt to find a precompiled assembly first when it needs to run an assembly. When an assembly has not been pre-compiled, the JIT compiler converts Microsoft intermediate language into processor-specific native code. The processorspecific native code cannot be used on other types of processors. It is possible to use a pre-compiled assembly in debug mode, but the native image must be generated with Ngen.exe by using the /debug or /debugopt option.

Question: 214. (A)

Your company, ESInsurance has developed an contacts management application that attempts to immediately contact insurance agents when e-mail messages arrive for them from high priority clients. Using a third party component the system sends a text SMS message or a multimedia SMS message to notify an individual salesperson by cellular telephone. The insurance agents can select any number of these contact methods when messages arrive for them. The system consists of the IncomingEmailComponent class, which periodically polls the e-mail server for messages. The system also includes several classes based on the EMailHandler class that contain the logic required to contact the insurance agent. When a message arrives, the IncomingEmailComponent class raises the MessageArrived event. All selected methods of contact are linked to this event with the AddHandler statement. Recently, several insurance agents have complained that when they remove a contact method from their selected contact methods, the application continues to use that contact method until the application is closed and restarted. When you look at the RemoveContactMethod routine, you discover that the task of removing a contact method is accomplished by destroying the appropriate EMailHandler-based object. What additional action should you take to most easily cause the application to perform as expected? (Select the best choice.)

- A. Call the RemoveHandler statement to unlink the EMailHandler object from the event.
- B. Remove the WithEvents clause from the EMailHandler object declaration.
- C. Call the AddHandler statement again and pass the Nothing keyword as the second parameter to unlink the EMailHandler object from the event.
- D. Destroy the IncomingEmailComponent class by setting it to Nothing, and then recreate it.

Answer: A

Explanation:

In this scenario, you should call the RemoveHandler statement to unlink the EMailHandler object from the event. The RemoveHandler statement is required in order to unlink an event handler from its associated event. The AddHandler statement is only used to associate an event handler with its associated event. Destroying the IncomingEmailComponent class and recreating it could also create the desired behavior. However, this is not the simplest solution. The WithEvents clause permits the events of the declared object to be received by the object's owner. The WithEvents clause cannot be used to disassociate an event handler from an event.

Question: 215. (C)

You are developing an order fulfillment system based on .Net for ESExporters. A DataTable containing orders must be dispatched to the shipping and accounting department. The DataTable must be identical in all aspects. Which of the following DataTable methods should you use? (Select the best choice.)

- A. Clone
- B. Equals
- C. ToText
- D. Copy

Answer: D

Explanation:

The Copy method of the DataTable class will create a DataTable object that includes the constraints, data and schema of another DataTable object. Although the Clone method is similar, the data table that it creates contains no data. The Equals method determines whether two DataTable objects are alike. The ToText method returns a string representation of a DataTable object.

Question: 216. (E)

Your company is developing an interactive multimedia application that teaches French, English, Swedish and Russian. The compressed speech files require almost 2,800 MB of disk space. You want to create an installation project for this application. This application project should create a set of installation files that will be distributed on 650 MB compact disks. You access the Project Properties dialog box for the installation project by right-clicking the project name in the Solution Explorer and selecting the Properties option from the pop-up menu. On this property page, you select the Build entry in the list of Configuration Properties property pages.

What is the most efficient way to create installation files that can be used with the Zip disks? (Select the best choice.)

- A. On the Build property page, change the Output file name property to point to a file that is located on the Zip disks. Build the project, and replace disks as necessary.
- B. On the Build property page, change the Package Files property to In loose, uncompressed files.
- C. On the Build property page, change the Package files property to In Cabinet Files. Change the CAB Size property to build files with a size of 600,400 KB.
- D. On the Build property page, change the Package Files property to In Setup File. Use a third-party filesplitting utility to split the setup file into 600,400-KB files that can be copied to the Zip disks.

Answer: C

Explanation:

To create installation files that can be used with the Zip disks, you should change the Package files property on the Build property page to In Cabinet Files and change the CAB Size property to 600,400 KB. When creating a setup application that is packaged in CAB files, you can choose the maximum size of the CAB files that will be created. Visual Studio will not automatically span the installation program across multiple disks if you use removable media with insufficient space for the application. You could package the installation in loose, uncompressed files if the largest file were no larger than 600,400 KB. You could also use a third-party tool to split the file in order to rebuild the file on the target computer and then run the installation. However, neither of these methods is the most efficient solution.

Question: 217. (B)

You are developing a customized email application for ESHelpDesk Inc. You are working on the email form. You use the RichTextBox control and want it to always fill the form. You also want the form to be resizable. How can you most efficiently implement this feature? (Select the best choice.)

- A. Set the Dock property of the RichTextBox control to Left, and set the Anchor property to Right.
- B. Set the Anchor property of the RichTextBox control to Top, Bottom.
- C. Set the Dock property of the frmIssueDescription form to Fill.
- D. Set the Dock property of the RichTextBox control to Fill.

Answer: D

Explanation:

Setting the Dock property to Fill causes the RichTextBox control to completely fill the available client area.

Question: 218. (E)

You are going to deploy your shareware application. You want to write registration settings for registered owners of your application to the system registry.

Which of the following actions should you perform to accomplish this task? (Select the best choice.)

- A. Use the Custom Actions editor to write the appropriate registry entries when the application setup is committed.
- B. Configure all of the settings in the Registry Editor. Use the Condition property of the entries to control which settings are actually entered into the user's registry.
- C. Use the File Types editor to write the appropriate settings to a .reg file. Have the installation program install the .reg file after the session is closed.
- D. Use the File System editor to write the appropriate settings to a .reg file. Have the installation program install the .reg file after the session is closed.

Answer: B

Explanation:

To determine which settings for your application will be written to the system registry based on the choices made by a user, you should configure all of the settings in the Registry Editor. You should then use the Condition property of the entries to control which settings are actually entered into the user's registry. The Registry Editor configures the registry settings that will be added by your installation program. The Condition property controls which entries are installed. The File Types editor associates a file extension with your application. The File Types editor is not used to manipulate registry files. The File System editor creates folders on the target computer, adds files to those folders or to the system folders, and creates shortcuts. The Custom Actions editor allows you to customize the installation in response to various installation events.

Question: 219. (C)

You develop a HR application which is Windows-Based application. The application accesses a Microsoft SQL Server database named Company1. When you test the application, you discover that the application is using too many individual connections. You must reduce the time needed to retrieve information.

How should you modify the connection string?

- A. to use the same application logon ID and password for every connection to the Company1 database.
- B. to use the Windows user logon when connection to the Company1 database.
- C. to use the SQL Server used login when connection to the Company1 database.
- D. to use the guest login ID and password for every connection to the Company1 database.

Answer: A Explanation:

We must use the same connection string to only use one connection pool.

Question: 220. (C)

You use Visual Studio .NET to develop a Windows based Ticketing application that interacts with a Microsoft SQL Server database. You need to fill the dataset with data. You have already created these:

SqlConnection object named CompanyConnection
SqlDataAdapter object named CompanyDataAdapter.
DataSet object named CompanyDataSet.

You need to modify your application code to ensure that data is displayed appropriately. Which behavior should occur while the CustomerForm.Load event handler is running?

- A. Execute the BeginInit method of CompanyDataSet.
- B. Execute the Open method of CompanyConnection.
- C. Execute the Fill method of CompanyDataAdapter as pass in SqlConnection.
- D. Execute the Fill method of CompanyDataSet.
- E. Execute the FillSchema method of CompanyDataAdapter and pass in CompanyDataSet.
- F. Execute the Fill method of CompanyDataAdapter and pass in CompanyDataSet.

Answer: F

Explanation:

Dataset is a container; therefore, you need to fill it with data. You can populate a dataset by calling the Fill method of a data adapter.

Question: 221. (A)

Your development team is creating a Windows-based application for the ESGrove Bank. The windows based application will use an XML Web service to asynchronously communicate with an application located in its headquarters in Delaware. The XML Web service will notify your code when it finished executing ApproveLoan. You must ensure that your code can continue processing while waiting for a response from the XML Web service. Your code must establish when ApproveLoan finished executing.

What should your application do?

- A. Supply a callback delegate to the ApproveLoan method of the XML Web service.
After the XML Web service returns its response, a thread will invoke the callback from the threadpool.
- B. Supply a callback delegate to the StartApproveLoan method of the XML Web service. After the XML Web service returns its response, a thread will invoke the callback from the threadpool.
- C. Supply a callback delegate to the ExitApproveLoan method of the XML Web service. After the XML Web service returns its response, a thread will invoke the callback from the threadpool.
- D. Supply a callback delegate to the EndApproveLoan method of the XML Web service. After the XML Web service returns it response, a thread will invoke the callback from the threadpool.
- E. Supply a callback delegate to the BeginApproveLoan method of the XML Web service. After the XML Web service returns its response, a thread will invoke the callback from the threadpool.

Answer: E Explanation:

Calling an XML Web service asynchronously is a two-step operation. The first step, calling the Begin method, initiates the XML Web service call. The second step, calling the End method, completes the XML Web service call and returns the XML Web service response. There are different methods to determine when the asynchronous XML Web service call has completed. The preferred and most efficient method is to supply a callback delegate to the Begin method.

Question: 222. (C)

You develop a Windows-based application for ParcelEx to track parcels. The application stores and retrieves data by using a Microsoft SQL Server database.

You will use the SQL Client managed provider to connect and send commands to the database. You use integrated security to authenticate users. Your server is called ParcelExSQLServer and the database name is TrackParcel.

You need to set the connection string property of the SQL Connection object. Which code segment should you use?

- A. "Data Source= ParcelExSQLServer; Initial Catalog=TrackParcel"
- B. "Provider=SQLOLEDB.1;Data Source=ParcelExSQLServer; Initial Catalog=TrackParcel"
- C. "Provider=SQLOLEDB.1;Source=ParcelExSQLServer; Initial Catalog=TrackParcel"
- D. "Provider=MSDASQL;Data Source= ParcelExSQLServer; Initial Catalog=TrackParcel"
- E. "Provider=OLEDB;Data Source= ParcelExSQLServer; Initial Catalog=TrackParcel"
- F. "Data Source= ParcelExSQLServer;Initial Catalog=Master"

Answer: A

Explanation:

We simply specify the name of the server as Data Source, and the name of database as Initial Catalog.

Question: 223. (A)

Your company, ESAirManagement, uses Visual Studio .NET to develop a highly scalable aircraft scheduling system which is linked to a Satellite weather service. You create a Windows control that will display weather information.

Many different developers at ESAirManagement will use the control to display the same information in many different applications, such as air traffic controlling. The control must always be displayed at the right of the parent form in every application. It must always be as tall as the form. When the form is resized, the control should be resized and repositioned accordingly. What should you do?

- A. Create a property to allow the developers to set the Dock property of the control. Set the default value of the property to AnchorStyle.Bottom.
- B. Create a property to allow the developer to set the Anchor property of the control. Set the default value of the property to AnchorStyle.Bottom.
- C. Place the following code segment in the UserControl_Load event: Me.Dock = DockStyle.Right
- D. Place the following code segment in the UserControl_Load event: Me.Anchor = AnchorStyle.Bottom

Answer: C

Explanation:

DockStyle.Bottom docks the control to the bottom of the form. This will force the control to be as wide as to form. Furthermore the control will be resized automatically.

Question: 224. (B)

You have been assigned to an application that was developed by a former coworker. The application contains the following code:

```
ESToolTip.AutoPopDelay = 1500 ESToolTip.ReshowDelay = 1500  
ESToolTip.InitialDelay = 1500 ESToolTip.ShowAlways = True
```

Users inform you that when they initially place their mouse cursors over a text box, the popup help displays as quickly as it should.

However, the users notice that the tool tip displays even when the parent control is not active. Which of the following changes would you make in order to correct this problem? (Select the best choice.)

- A. Change ShowAlways to False.
- B. Change InitialDelay to 500.
- C. Change AutoPopDelay to 500.
- D. Change ReshowDelay to 500.

Answer: A

Explanation:

The ShowAlways property determines if a tool tip should display even when the parent control is not active.

Question: 225. (D)

You are in the process of developing an application which is due next week. You will be out of the office for the next few days for a .Net seminar. Several code segments will require your junior software engineer's immediate attention, whose name is Joseph. You want Joseph to be able to look at the Task List window to see all outstanding tasks. What keyword will you use at the beginning of your comments in code so that they will appear in the Task List window? (Select the best choice.)

- A. REM
- B. TASK
- C. FIX
- D. TODO

Answer: D

Explanation:

All comments that begin with TODO are shown in the Task List window, provided that the Show All or the Policy option is selected. By typing text in the first line of the Task List window, other items can be added to the Task List window without adding TODO comments in code. You can navigate among tasks in code by double-clicking items in the task list.

Question: 226. (A)

You are developing a client application that retrieves GPS information from a GPS satellite. Due to satellite communication latency you have to use the asynchronous version of the method call, GetLocation. Which of the following methods of the proxy class should you use to manipulate the Web service? (Select all choices that are correct.)

- A. EndGetLocation
- B. StartGetLocation
- C. GetLocationAsynch
- D. GetLocation
- E. BeginGetLocation
- F. StopGetLocation

Answer: A, E

Explanation:

To invoke the asynchronous version of the GetLocation method of the Web service, you should use the methods BeginGetLocation and EndGetLocation. WSDL.exe generates two methods for the asynchronous version of a Web service method call. These methods are named by prefixing the root method name with the Begin and End prefixes. The synchronous version of the method call is named by the root method name, which is GetLocation in this instance.

Question: 227. (C)

You are the lead developer at Company. You are creating a class to handle SQL error. All developers in your company will inherit from this class. Which of the following properties should you use to most efficiently determine the severity level of the data access errors? (Select the best choice.)

- A. `SQLException.Class`
- B. `SqlTransaction.Connection`
- C. `SqlInfoMessageEventArgs.Errors`
- D. `SqlError.Source`

Answer: A

Explanation:

The `Class` property of the `SQLException` class issues a number between 1 and 25 that indicates the severity of the exception; higher numbers indicate a more serious problem. The `Errors` property of the `SqlInfoMessageEventArgs` class is a collection of warning messages that are sent from Microsoft SQL Server. It is possible to evaluate each message in this collection, but this would not be the most efficient solution. The `Connection` property of the `SqlTransaction` class returns a `Connection` object for a transaction. The `Source` property of the `SqlError` class returns the provider's name that produced the error.

Question: 228. (C)

You have built an application that allows Company's Air Controller Officers to monitor flights that are delayed because of bad weather. The application uses a third-party reporting tool to print each day's lights. Users want to be able to sort the data in the `DataGridView` object in any order of their choice. Which of the following lines of code will best sort the data in the `DataGridView` object according to the user's choice of columns? (Select the best choice.)

- A. `dataGridViewReport.Sort (comboBoxColumn.Text & " ASC")`
- B. `dataGridViewReport.RowFilter = comboBoxColumn.Text & " ASC"`
- C. `dataGridViewReport.ApplyDefaultSort`
- D. `dataGridViewReport.Sort = comboBoxColumn.Text & " ASC"`

Answer: D

Explanation:

Setting the `Sort` property of a `DataGridView` object will determine the sorting order. The data can be sorted in ascending or descending order by using `ASC` or `DESC`, respectively, in the expression. The `ApplyDefaultSort` method can only be used to sort data by the primary key. The `RowFilter` property filters data, but does not sort it.

Question: 229. (C)

You are a contract programmer at ESMacroware. You have just finished modeling the database using Visual Studio .Net. You have identified a table with two columns to be implemented. `Column1` will be the primary key. Which of the following code fragments should you use to create the primary key? (Select the best choice.)

- A. `tableNew.PrimaryKey = tableNew.Columns("NewColumn1") tableNew.PrimaryKey = tableNew.Columns("NewColumn2")`
- B. `Dim columnArray(2) as DataColumn columnArray(0) = tableNew.Columns("NewColumn1") columnArray(1) = tableNew.Columns("NewColumn2") tableNew.PrimaryKey = columnArray`
- C. `Dim columnArray(2) as DataColumn columnArray(0) = tableNew.Columns("NewColumn1") columnArray(1) = tableNew.Columns("NewColumn2") tableNew.Constraints.Add(columnArray)`
- D. `tableNew.PrimaryKey = tableNew.Columns("NewColumn1"), tableNew.Columns("NewColumn2")` Original choice order: adcb

Answer: B

Explanation:

The PrimaryKey property of the DataTable class sets one or more columns as the primary key, which uniquely identifies each row. When defining a primary key that consists of more than one column, you can declare an array, assign each column of the primary key to the array and then assign the array to the PrimaryKey property. The Constraints property is used to constrain actions between related tables, such as deleting child records when the parent record is deleted.

Question: 230. (F)

You are maintaining an Accounting System made by several former employees. You notice that the CausesValidation property of one of the buttons on one of the forms is set to True. Which behavior can you expect the button to exhibit? (Select the best choice.)

- A. It will be impossible to tab to the button.
- B. The Leave event of the button will never execute.
- C. The Validated and LostFocus events of the button may not execute.
- D. Focus will never leave the button.

Answer: C**Explanation:**

The CausesValidation property controls whether the Validating event fires. If set to True, then code in the Validating event can determine whether the Validated and LostFocus events execute. The Leave event will execute normally regardless of the value of the CausesValidation property. The button can lose focus if the Cancel property of the Validating event is not set to True. The TabStop property, not the CausesValidation property, prevents a control from receiving focus by using the TAB key.

Question: 231. (F)

You use Visual Studio .NET to create a Windows-based application for Trucking Ltd to analyze usage. The application includes a form named Graphical3DForm, which displays vehicle utilization statistical data in 3D graph format. You use a third party custom graphing control that does not support resizing. You must ensure that users cannot resize, minimize, or maximize Graphical3DForm. Which three actions should you take? (Each answer presents part of the solution. Choose three)

- A. Set Graphical3DForm.ImeMode to Enabled.
- B. Set Graphical3DForm.ControlBox to True.
- C. Set Graphical3DForm.MinimizeBox to False.
- D. Set Graphical3DForm.ControlBox to False.
- E. Set Graphical3DForm.ImeMode to Disabled.
- F. Set Graphical3DForm.WindowState to Maximized.
- G. Set Graphical3DForm.FormBorderStyle to one of the Fixed styles.
- H. Set Graphical3DForm.GridSize to the appropriate size.
- I. Set Graphical3DForm.MaximizeBox to False.

Answer: C, G, I**Explanation:**

We disable the Minimize and Maximize buttons with the Graphical3DForm.MinimizeBox and the Graphical3DForm.MaximizeBox properties. Furthermore we should use a fixed FormBorderStyle to prevent the users from manually resizing the form.

Question: 232. (B)

You have just created a component that will perform routing calculations for ParcelEx. Which of the following are valid constructors for a user-defined object named RouteCom? (Select the best choice.)

- A. Public Function New()
- B. Private Sub RouteCom()
- C. Class_Initialize()
- D. Public Sub New(ByVal DestinationID as Integer, ByVal SourceID as Integer)

Answer: D

Explanation:

Constructors must be subroutines named New. Constructors can take any number of parameters of any data type. The Sub New procedures in Visual Basic .NET take the place of the Class_Initialize procedures used in previous versions of Visual Basic. Constructors cannot return a value, so they must be defined as subroutines, not as functions.

Question: 233. (E)

You have installed .NET on every company computer. You instruct Caleb, your subordinate, to begin the installation of .NET applications. After installing the first .NET application on one computer, Caleb receives the following message when he attempts to run the application for the first time:

D:\Program files\Microsoft.NET\Framework\1.0.3705\mscorlib.dll could not be loaded. Which of the following actions should you try first to correct the problem? (Select the best choice.)

- A. Purge and recreate the global assembly cache.
- B. Use regasm.exe to attempt to repair your installation of the .NET framework.
- C. Use fix.exe to attempt to repair your installation of the .NET framework.
- D. Use dotnetfx.exe to attempt to repair your installation of the .NET framework.
- E. Use installutil.exe to attempt to repair your installation of the .NET framework.
- F. Use ILDASM.exe to attempt to repair your installation of the .NET framework.
- G. Reinstall the application.

Answer: D

Explanation:

To correct the problem indicated by the error message, you should first use dotnetfx.exe to attempt to repair your installation of the .NET framework. The DLL mscorwks.dll that is mentioned in the error message is a part of the .NET framework. The dotnetfx.exe application contains the common language runtime and the .NET framework files required to execute .NET applications, and can be used to repair corrupted .NET installations. Rebuilding the global assembly cache or reinstalling the application is unlikely to have any effect on the problem that is causing this message to appear because neither of these actions supplies the missing DLL file. The ILDASM.exe application is used to assemble Microsoft Intermediate Language files, not to repair DLL files or .NET installations.

Question: 234. (F)

You have just released a Release Candidate for your application ESInventoryApp. The Inventory Manager wants the application to load faster. You need to decrease the amount of time it takes for the initial form to load in your application. What should you do? (Select the best choice.)

- A. Caspol.exe
- B. Sn.exe
- C. Gacutil.exe
- D. Ngen.exe

Answer: D

Explanation:

The Native Image Generator tool, Ngen.exe, pre-compiles code into processor-specific native code. This code loads more quickly than Microsoft intermediate language (MSIL) because it bypasses the just-in-time (JIT) processor's conversion of MSIL to native code. The Strong Name tool, Sn.exe, is used to give assemblies strong names for unique identification. The Global Assembly Cache tool, Gacutil.exe, manages the contents of the global assembly cache. The Code Access Security Policy tool, Caspol.exe, manages security policies.

Question: 235. (D)

You have deployed your Windows application for ESFastFoods Inc. However, users complain that the application does not perform calculation of service tax correctly. You open the source code and place several Debug.WriteLine statements in the code to display the value of critical variables at strategic points in the code. When you run the application, you do not see any output from these statements. When you set a breakpoint at the first of the inserted statements and run the application again, the application executes without stopping at the breakpoint. Which of the following actions should you take to view the output from the Debug.WriteLine statements? (Select the best choice.)

- A. Start the application. Choose the Processes... menu option from the Debug menu. In the Available Processes list, choose your application and click the Attach button.
- B. Start the debugging process by choosing Step Into from the Debug menu.
- C. On the General pane of the Debugging folder in the Options dialog box, ensure that the setting In break mode, only stop execution of the current process is turned off.
- D. Select the Debug build configuration and start the application.

Answer: D

Explanation:

To view the output from the Debug.WriteLine statements, you should select the Debug build configuration and start the application. Breakpoints and methods of the Debug object are ignored when the solution configuration is set to Release. The Processes... menu option of the Debug menu is used to select an external process, such as a Windows service, to be debugged. The method that is used to start the application has no effect on the behavior of breakpoints and the Debug object. The In break mode, only stop execution of the current process setting of the General pane of the Debugging folder in the Options dialog box controls whether external processes are stopped when execution of the process being debugged is halted by the debugger.

Question: 236. (F)

ESBookshop has created a .NET application, ESBookshopCatalog. It is installed on the company's server. Individuals in ESBookshop are able to access the application through a network share and run it on their computers. You discover that somehow, prices and ISBN of books are changed erroneously. You want to run the application on your computer with tracing enabled. Which of the following actions will enable tracing without affecting other users of the application? (Select the best choice.)

- A. On your computer, change the trace level of ESBookshopCatalog in the Machine.config file.
- B. On the server, change the trace level in the ESBookshopCatalog.exe.config file.
- C. On the server, change the trace level of ESBookshopCatalog in the Machine.config file.
- D. On your computer, change the trace level in the ESBookshopCatalog.exe.config file.

Answer: A

Explanation:

Tracing may be enabled or disabled by setting the trace level in either the application or machine configuration file. In this scenario, the application resides on a server; therefore, the application configuration file will reside on the server as well. No client-side application configuration file exists. In order to modify the trace level for a single computer, you need to adjust the trace level on your computer's machine configuration file. Machine configuration files contain settings for applications as well as computer-level settings. The trace level is located under the ESBookshopCatalog section in the Machine.config file. If you were to modify the configuration files on the server, then every user would be affected.

Question: 237. (D)

You have been hired by ESArts to develop a 3D application that will perform complex 3D mathematical calculations and produce reports based on the results of the calculations. One of the calculations requires that a variable, singleX, be divided by singleY and assigned to variable singleZ. If any arithmetic errors result from the calculation, such as dividing by zero, singleZ should be equal to one. You have written the following code:

```
01 Try
02 singleZ = singleX/singleY
```

```
04 singleZ = 1
05 End Try
```

Line numbers are for reference purposes only. Which of the following lines of code should you insert in line 03? (Select the best choice.)

- A. Catch ArithmeticException
- B. Finally ArithmeticException
- C. Catch thisException as ArithmeticException
- D. Finally thisException as ArithmeticException

Answer: C

Explanation:

An ArithmeticException object is thrown when there is an arithmetic error. This can result from dividing by zero or attempting to assign the result of an operation to a variable that is outside the variable's range of allowable values. The ArithmeticException class is the base class of DivideByZeroException, NotFiniteNumberException and OverflowException. If you want to catch specific arithmetic exceptions, then use the subclasses. For example, if you only wanted to test for divide-by-zero errors, then you should use code that resembles the following: Catch thisException as DivideByZeroException It is good coding practice to surround calculations within a Try... Catch... Finally structure to handle errors that might occur.

Question: 238. (E)

You have completed a Windows Form application for your client, ESFriedChicken. You want to deploy an assembly into the GAC on your client's computer with the least amount of effort. Which tool is most appropriate for installing the assembly? (Select the best choice.)

- A. Microsoft Windows Installer 2.0
- B. XCOPY
- C. Gacutil.exe
- D. Ngen.exe

Answer: C

Explanation:

During the development process, you can use the Global Assembly Cache tool, Gacutil.exe, or even Windows Explorer to place assemblies into the GAC. However, using an installer ensures that the assembly reference counter is updated.

Question: 239. (B)

You are planning to install an assembly, ESHotelBookings, on a computer. FrontDeskApp V5.0 and HallBookingsApp V5.0 will rely on this assembly. An older application, GolfBookingApp V1.2, requires a particular version of ESHotelBookings in order to run properly. What action is required so that the common language runtime will be able to locate the correct version of ESHotelBookings when GolfBookingApp V1.2 executes? (Select the best choice.)

- A. Use the Sn.exe utility to assign the assembly a strong name.
- B. Use Regsvr32.exe to register the assembly.
- C. Use the Fuslogvw.exe tool to modify assembly bindings.
- D. Place a publisher policy in the GAC.

Answer: A Explanation:

The common language runtime considers only assemblies with strong names when it is searching for a specific version of an assembly to use in an application. The Sn.exe utility creates a strong name for an assembly.

Question: 240. (F)

You are developing menu for an exploration application for the Company Museum of Science. The users consist of children below 12 years old. You add a custom control that will display information about your application's menu items whenever the mouse pointer is positioned over each menu item. In which menu item event should you place code that will load the custom control with information regarding the menu item? (Select the best choice.)

- A. MeasureItem
- B. PopUp
- C. Select
- D. DrawItem

Answer: C

Explanation:

The Select event of a menu item occurs when the mouse cursor is positioned over a menu item or when a menu item is highlighted by using the arrow keys on the keyboard. The Select event provides the ideal time to display information about the menu item currently under the mouse cursor. The PopUp event occurs before a submenu is displayed. The DrawItem and MeasureItem events occur before a menu item is drawn.

Question: 241. (C)

ESHolidays has commissioned you to create a .Net Windows application to manage customer information. Hotel Executives will use it to update customers' profile information. You use ADO.Net for data access and DataTables, DataViews and other classes to manipulate data.

Which method should you use to apply row edits in a DataView object to the underlying data table? (Select the best choice.)

- A. EndEdit
- B. LoadDataRow
- C. AcceptChanges
- D. Merge

Answer: A

Explanation:

When edits are made to a row in a DataView object, the EndEdit method of the DataRowView object must be called in order to apply those changes to the underlying data table. The AllowEdit property of the data view must be set to True before changes are made to any rows in a data view. If the AllowEdit property were set to False, then an exception would be thrown when an attempt to modify a row occurred. You should remember that applying a data view's row edits to the underlying table does not guarantee that the changes will be saved to the database. For example, it is possible to edit a row in a data view, apply the changes to the underlying data table object by calling the DataRowView.EndEdit method and then prevent the changes from reaching the database by calling DataTable.RejectChanges.

Question: 242. (D)

You have been just assigned to help your colleague, Ian to complete a Company College Course Registration application in .Net. After incorporating the source files back into the solution, you notice that the files contain several syntax errors. What is the simplest way to locate all of the syntax errors? (Select the best choice.)

- A. Attempt to build the solution. When the compiler identifies an error and stops, correct the error. Repeat this process until all errors are found.

- B. Open the Task List window. Either remove the filter or set the filter to Build Errors to see a list of all of the syntax errors.
- C. Use the Debug Processes... menu option of the Tools menu to locate the syntax errors.
- D. Use the Exceptions menu option of the Debug menu to locate the syntax errors.

Answer: B

Explanation:

The simplest way to locate all of the syntax errors is to open the Task List window and either remove the filter or set the filter to Build Errors. After a build is attempted, Visual Studio .NET adds each build error to the task list in the Build Errors category. Double-clicking an error in the task list will navigate to the error's location in code.

Question: 243. (C)

You develop an application for use by the University of Company. Your application contains a DataGrid control that is bound programmatically to a data set at runtime. The DataSet object, dsCourseData, is based on two tables: Courses and CourseSections. The data grid will update data in the CourseSections table. From the CourseSections table, the ClassLocation, EnrolmentCount and ProfessorAssigned fields will be displayed in the data grid. Which of the following lines of code will bind the data grid to the data set? (Select the best choice.)

- A. gridMain.SetDataBinding(dsCourseData)
- B. gridMain.SetDataBinding(dsCourseData, " CourseSections", " ClassLocation, EnrolmentCount, ProfessorAssigned ")
- C. gridMain.SetDataBinding(dsCourseData, " CourseSections")
- D. gridMain.SetDataBinding(dsCourseData, dsCourseData.Tables("Inventory"))

Answer: C

Explanation:

The SetDataBinding method binds a DataGrid control to a DataSet or other data source. The SetDataBinding method receives two parameters. The first parameter is a data source object and the second parameter is a string that specifies which table in the data source to bind to. The SetDataBinding method should be called in order to re-bind the data in the event that a new data set is assigned to the data grid.

Question: 244. (G)

You are the .Net developer for ESSoftwareHouse. Recently, your IT Manager has noticed several employees using unauthorized software on computers during working hours. You need to prevent employees from using unauthorized .NET software on the production floor computer with the least effort. What should you do? (Select the best choice.)

- A. Using the Caspol utility, add a Publisher restriction to the ALL_CODE group at the user level. Import the Publisher certificates of the publishers of the unauthorized software into this restriction.
- B. Using the Caspol utility, add a Publisher condition to the ALL_CODE group at the machine level. Import your company's Publisher certificate into this condition.
- C. Using the Caspol utility, add a Publisher condition to the ALL_CODE group at the enterprise level. Import your company's Publisher certificate into this condition.
- D. Using the Caspol utility, add a Publisher condition to the ALL_CODE group at the user level. Import your company's Publisher certificate into this condition.

Answer: B

Explanation:

To prevent employees from using unauthorized .NET software on the production floor computer, you should use the Caspol utility to add a Publisher condition to the ALL_CODE group at the machine level, then import your company's Publisher certificate into this

condition. In this scenario, because the security issues are confined to a single computer and involve multiple users, the security conditions should be changed at the machine level.

Question: 245. (C)

Your code reads in an XML document and creates a DataSet object. You want to relate two tables. Which of the following classes should you use? (Select the best choice.)

- A. ForeignKeyConstraint
- B. XmlSchema
- C. UniqueConstraint
- D. DataColumn

Answer: C

Explanation:

The ForeignKeyConstraint class restricts a relationship between data in separate tables.

Question: 246. (F)

ESMovers has employed you to develop a package tracking system. Your system uses a tracking number of this format: ES-XXXX-X-9999-9999. You want to add input verification to a data entry application so that tracking numbers are always entered in the same format. While the tracking number text box still has focus, you want to notify users when they press the TAB key if the tracking number that they have entered is not properly formatted. Focus should remain in the tracking number text box until the tracking number is entered correctly. In what text box event should you add code that checks the tracking number formatting and prevents focus from leaving the tracking number text box? (Select the best choice.)

- A. Validated
- B. LostFocus
- C. KeyUp
- D. Validating

Answer: D

Explanation:

The Validating event occurs before the Validated and LostFocus events; therefore, it is the best location for checking the format of the tracking number. The Validating event also receives a CancelEventArgs argument. If the Cancel property of CancelEventArgs is set to True, then the Validated and LostFocus events will not fire and focus will remain in the text box. The KeyUp event occurs when a keyboard key returns to the up position, which would cause the validation code to run more often than necessary. The LostFocus event occurs too late to prevent focus from leaving the text box.

Question: 247. (B)

You are creating a data entry form that will be used by your ESParcelEx to search for parcel information. The form contains text boxes to accept each customer's name, package tracking number, customer's telephone number, customer's address and priority type. Your application will query a Microsoft SQL Server database at the time that the package tracking number is entered. If a record is found in the database with a matching tracking number, then the form will automatically enter the customer's name, customer's telephone number and customer's address; in this case, you do not want the user to be able to tab to these text boxes. However, the user should be able to select the text boxes and edit the data if necessary.

Which of the following actions will prevent the user from tabbing to these text boxes while allowing the data to be edited? (Select the best choice.)

- A. setting the TabIndex property of each text box to 0
- B. setting the TabStop property of each text box to False

- C. setting the AcceptsTab property of each text box to False
- D. setting the Enabled property of each text box to False

Answer: B

Explanation:

The TabStop property of a control can be set to False to prevent the control from receiving focus when the TAB key is used. The control can still receive focus when a user clicks the control. Setting the Enabled property to False prevents a control from receiving focus, but it also prevents the data inside of the control from being edited. Setting the TabIndex property of a control to 0 sets that control to receive focus first. Setting the AcceptsTab property to False causes focus to move to the next control rather than inserting a tab character when the TAB key is pressed in a multiline text box.

Question: 248. (E)

You are deploying your application. You need to detect if Windows Installer is installed on the target machine. If Windows Installer is not present, you need to install Windows Installer before proceeding with the rest of the installation. What should you do? (Select the best choice.)

- A. Use a bootstrapper application
- B. Deploy your application using XCOPY
- C. Deploy your application using a merge module
- D. Use Ngen.exe utility to deploy your application.

Answer: A

Explanation:

A bootstrapper application automatically detects if Windows Installer is installed on the target machine. If Windows Installer is not present, it installs Windows Installer before proceeding with the rest of the installation. You should create a bootstrapper application unless all of your target machines are running Windows XP (which has Microsoft Windows Installer 1.5 already installed) or have had Microsoft Installer 1.5 installed previously.

Question: 249. (E)

You are deploying a small file transfer protocol utility in your company, TesESing. All computers use Windows XP. The application has no dependency on shared files and requires no special actions to be taken upon deployment. You need to deploy it with the least effort. What should you do? (Select the best choice.)

- A. Use a bootstrapper application
- B. Deploy your application using XCOPY
- C. Deploy your application using a merge module
- D. Use Ngen.exe utility to deploy your application.

Answer: B

Explanation:

XCOPY deployment is a simple method of deployment where the DOS command XCOPY is used to copy the application directory and any subdirectories to the target machine. You can use XCOPY deployment if your application has no dependency on shared files and requires no special actions to be taken upon deployment. If an application requires a more complex deployment or references shared assemblies, you cannot use XCOPY.

Question: 250. (F)

You need to read the configuration file at run time. You need to achieve your goal with the least effort. What should you do? (Select the best choice.)

- A. Use XMLPathDocument
- B. Use XMLDataDocument
- C. Use AppSettingsReader
- D. Use XmlDocument

Answer: C

Explanation:

You must first create an instance of AppSettingsReader to read the configuration file. You can then call the GetValue method to read values represented in the configuration file. To add configuration file entries, you should create <add> elements in the <appSettings> node of the configuration file. In the <add> element, you should specify a value for the entry and a key that can be used to retrieve the entry. The value can be changed between executions of the application.

Question: 251. (G)

You are creating a solution that must be accessed by members of a group called Developers and Administrators on the local machine. Describe a plan to implement this security scheme. What should you do? (Select the best choice.)

- A. Create one PrincipalPermission that represents the Developers group and another PrincipalPermission that represents the BUILTIN\Administrators group. Then, create a third permission that represents the union of the two by calling the Intersect method and demand that permission.
- B. Create one WindowsPrincipal that represents the Developers group and another WindowsPrincipal that represents the BUILTIN\Administrators group. Then, create a third permission that represents the union of the two by calling the Intersect method and demand that permission.
- C. Create one CustomIdentity that represents the Developers group and another CustomIdentity that represents the BUILTIN\Administrators group. Then, create a third permission that represents the union of the two by calling the Union method and demand that permission.
- D. Create one PrincipalObject that represents the Developers group and another PrincipalObject that represents the BUILTIN\Administrators group. Then, create a third permission that represents the union of the two by calling the Union method and demand that permission.
- E. Create one PrincipalPermission that represents the Developers group and another PrincipalPermission that represents the BUILTIN\Administrators group. Then, create a third permission that represents the union of the two by calling the Union method and demand that permission.

Answer: E

Explanation:

To ensure that your solution can be accessed by members of a group called Developers and Administrators on the local machine, you need to create one PrincipalPermission that represents the Developers group and another PrincipalPermission that represents the BUILTIN\Administrators group. Then, create a third permission that represents the union of the two by calling the Union method and demand that permission.

Question: 252. (B)

Your company is planning to release a word processing application, using .Net, called ESWord. Your company aims to take part in the Certified for Windows logo program. What standards should your application meet? (Select all that applies.)

- A. Support standard system settings. This requires your application to be able to conform to system settings for colors, fonts, and other UI elements.
- B. Be compatible with High Contrast mode. This requirement can be met by using only the System palette for UI colors.
- C. Provide documented keyboard access for all UI features. Key points in this requirement are shortcut keys and accessible documentation.
- D. Provide notification of the focus location. This requirement is handled primarily by the .NET Framework.
- E. Convey no information by sound alone. This requirement can be met by providing redundant means of conveying information.

Answer: A, B, C, D, E

Explanation:

The five requirements of the Certified for Windows logo program are

- ☐ Support standard system settings. This requires your application to be able to conform to system settings for colors, fonts, and other UI elements.
- ☐ Be compatible with High Contrast mode. This requirement can be met by using only the System palette for UI colors.
- ☐ Provide documented keyboard access for all UI features. Key points in this requirement are shortcut keys and accessible documentation.
- ☐ Provide notification of the focus location. This requirement is handled primarily by the .NET Framework.
- ☐ Convey no information by sound alone. This requirement can be met by providing redundant means of conveying information.

Question: 253. (A)

Your company, Company.net, is a nationwide webhosting service provider that allows other companies to resell their services. You are currently working on a set of Web services that will allow these resellers to manage different aspects of the webhosting service. Although your Web services will not be online for another five months, several resellers want to begin developing applications based on your specifications. What should you do to allow these resellers to begin developing their applications? (Select the best choice.)

- A. Open your corporate firewall to allow DCOM traffic to pass through.
- B. Use Wsdl.exe to generate proxy classes for your exposed Web services. Send these proxies to your resellers.
- C. Send to the resellers the application configuration files that are associated with the Web services.
- D. Allow the resellers to download the source code of your Web services.

Answer: B

Explanation:

To allow the resellers to begin developing their web hosting application, you should use the Web Services Description Language Tool, or Wsdl.exe, to generate proxy classes for your exposed Web services and send the proxies to your resellers. Wsdl.exe can generate proxy classes that enable programmers to more easily code against your Web services. Allowing the resellers to download the source code of your Web services could make trade secrets available to the public. In addition, resellers might not have the necessary components to easily use your source code. Opening the firewall to allow DCOM traffic is a serious security risk, and it does not contribute to the solution. The application configuration files associated with the Web services do not contain the information necessary to assist an application developer in writing applications for the Web services.

Question: 254. (D)

You are debugging a lengthy method developed by a former Company employee. You need to display the variable names and values in the current statement and the immediately preceding statement? (Select the best choice.)

- A. Call Stack
- B. Watch
- C. Immediate
- D. Autos

Answer: D

Explanation:

As you step through an application's code, you can use the Autos window to display the variable names and values in the current statement and the immediately preceding statement. The Autos window highlights in red those values that have just changed so that

you can easily locate and review those values. The Watch window allows you to monitor the value of variables that you have specified. The Call Stack window displays a list of procedures that are currently executing. The Immediate window displays the value of a variable when a Debug or Trace command is issued.

Question: 255

You are creating a Windows Form application for store highly sensitive company data. You have configured a permission set that grants any application the maximum level of security to meet the operational requirement. You want to ensure that no other security settings can be used to grant more permissions than those contained in this set. Which of the following actions should you perform to accomplish your goal? (Select the best choice.)

- A. Use the Caspol utility to set the LevelFinal attribute on your default permission set.
- B. Use the Permview utility to set the LevelFinal attribute on your default permission set.
- C. Use the Permview utility to set the Exclusive attribute on your default permission set.
- D. Use the Caspol utility to set the Exclusive attribute on your default permission set.

Answer: D

Explanation:

To ensure that no other security settings can be used to grant more permissions than those contained in the set that you have configured, you should use the Caspol utility to set the Exclusive attribute on your default permission set. The Caspol utility is used to view and modify security information. Setting the Exclusive attribute on a permission set defines the maximum security settings that are permissible at that policy level. No other permissions set can grant permissions that are not granted by this set. The LevelFinal attribute prevents any policy level other than the application domain level below a particular policy level from having any effect. When the LevelFinal attribute is applied to the enterprise level, the machine-level and user-level settings are not considered. The Permview utility is used only to view, not configure, security settings.