

**PASS4SURES.COM**

A Composite Solution With Just One Click

# Microsoft

## **70-519 PRACTICE EXAM**

**PRO:Designing & Developing Web Apps Using MS .NET Frmwk 4 (C# and VB)**

**70-519CSHARP>>>>>Questions: 114+2CaseStudy**

**70-519VB>>>>>>>>>Questions: 132+2CaseStudy**

---

**TOTAL>>>>>>>>>>Questions: 246+4CaseStudy**

---

### **Case Study: 1**

**Case Study Name: 70-519CSHARP**

**Case Study Text:**

**70-519CSHARP Mix QUESTIONS IN THIS CASE STUDY**

---

#### **Question: 1**

---

You are designing an ASP.NET Web application. You have the following requirements:

- Users must be allowed to save their work in progress on one computer and to continue the work on another computer.
- Data that is submitted for processing must be valid, and invalid data must be rejected.
- Primary key constraints within the database must be enabled at all times
- The application must store only data that is entered by the user

You need to design data validation to support the requirements. Which two approaches should you recommend (Each correct answer presents part of the solution. Choose two.)

- A. Store temporary form data as XML in a database table.
- B. Use validators to verify the data when the user submits a form.
- C. Add an is Temporary column to each database table, and set all columns to allow null values
- D. Provide default values for the database columns, and submit the form with user-entered values when the user saves the form.

---

**Answer: A, B**

---

---

#### **Question: 2**

---

You are designing an ASP.NET Web application. The application must provide a data access method that supports HTTP, MTOM, SOAP, and TCP. You need to ensure that customers can integrate their applications with the data sources and business rules for your Web application. Which data access technology or technologies should you recommend?

- A. Entity Framework
- B. Windows Communication Foundation

- C. ADO.NET DataSets and ASP.NET Web Services
- D. ADO NET DataTables and ASPNET Web Services

---

**Answer: B**

---

---

**Question: 3**

---

You are designing an ASP.NET Web application that allows users to type a value in a text box. The application must function with JavaScript disabled. You need to design a method for using a Web service to validate the user-typed value before the form is processed. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Use a CustomValidator control.
- B. Use a DynamicValidator control.
- C. Use an OnServerValidate method.
- D. Use a ClientValidationFunction method.

---

**Answer: A, C**

---

---

**Question: 4**

---

You have an ASP.NET Web Forms application for processing orders. Many users of the application submit their order forms multiple times due to incorrectly formatted credit card information. You need to plan for validation of the length and format of data in the credit card field on the client side prior to processing each transaction. Which approach should you recommend?

- A. Use a Custom Validator control in the Page\_Load method.
- B. Use a Custom Validator control in the On Server Validate method
- C. Use a Required Field Validator control and a Compare Validator control.
- D. Use a Required Field Validator control and a Regular Expression Validator control.

---

**Answer: D**

---

---

**Question: 5**

---

You are designing an internal Web application. You have the following requirements:

- Use an existing data layer built on the Entity Framework
- Ensure that additional Entity Framework entities can be supported without additional coding.

You need to design the Web application so that users can add, edit, and delete data. Which approach should you recommend?

- A. Create an ASPNET Dynamic Data project.
- B. Create an ASP.NET MVC 2 project and use the Entity Framework data layer as your model.
- C. Create an ASP.NET Web Forms application and set the Data Source Id for each Grid View to an Entity Data Source control.
- D. Create an ASP.NET Web Forms application and set the Data Source Id for each Grid View to an Object Data Source control.

---

**Answer: A**

---

---

**Question: 6**

---

You are designing an ASP.NET MVC 2 Web application. You have the following requirements:

- Type safety must be validated at compile time.
- Code must not require explicit run-time type casting.

You need to pass data between the controllers and the views within the Web application. Which approach should you recommend?

- A. Use the ViewDataDictionary class.
- B. Use the TempDataDictionary class.
- C. Use strongly typed view model classes.
- D. Use dynamic object view model classes.

---

**Answer: C**

---

---

**Question: 7**

---

You are designing an ASP.NET Web application for display on desktop computers and on mobile devices. You have the following requirements:

- Present a full-featured interface to users of desktop computers that include many interaction options and graphical buttons.
- Present a simple interface to users of mobile devices that do not include bandwidth-intensive elements.

You need to design the Web application to meet the requirements. Which two approaches should you recommend? (Each correct answer presents part of the solution? Choose two.)

- A. Create two separate skins for desktop and mobile user interfaces
- B. Create two separate themes for desktop and mobile user interfaces
- C. In the PreRender method of the Web application's master page, test Request.Browser.MobileDeviceModel and switch to the appropriate interface.
- D. Create a System.Web.UI.Page subclass that all Web application pages inherit from. In the Page\_PreInit method, test Request.Browser.IsMobileDevice and switch to the appropriate interface

---

**Answer: B, D**

---

---

**Question: 8**

---

You are designing the user interface for an ASP.NET Web application. The Web application allows several departments to personalize the style of their sections of the Web application. All departmental section styles derive from the core styles of the Web application and can only append to the Web application's core styles. The departmental master pages inherit from the Web application's master page. You need to ensure that core CSS styles appear on all pages of the Web application. Which approach should you recommend?

- A. Add a master.css file containing the CSS styles to the Web application.
- B. Add a Content Place Holder containing the CSS styles to the Web application's master page
- C. Link from the Web application's master page to a .css file containing the CSS styles.
- D. Link from the Web application's master page to a css.ascx file containing the CSS styles.

---

**Answer: C**

---

---

**Question: 9**

---

You are designing an ASP.NET Web application for content management. You have the following requirements:

- Support multiple browsers.
- Display a specific interface for browsers that have display dimensions of less than 640 x 480 pixels.

You need to design a solution for identifying the display dimensions of the requesting browser. Which approach should you recommend?

- A. Use CurrentUICulture.
- B. Use the HttpUtility class.
- C. Use the HttpWorkerRequest class.
- D. Use the HttpBrowserCapabilities class.

---

**Answer: D**

---

---

**Question: 10**

---

You are designing an ASP.NET Web application for content management. You have the following requirements:

- Support multiple languages.
- Support dynamic changes to site content.
- Provide the ability to add content to the site without making changes to files within the application directory.

You need to recommend the application's source for retrieving content. Which source should you recommend?

- A. a database based on CurrentUICulture
- B. a master page based on CurrentUICulture
- C. local resources based on CurrentCulture
- D. global resources based on CurrentCulture

---

**Answer: A**

---

---

**Question: 11**

---

You are designing an ASP.NET Web Forms application. You have the following requirements:

- Make use of exclusive features in a newly released Web browser.
- Do not change existing code files.

You need to design the application to meet the requirements. Which approach should you recommend?

- A. Use a .browser file.
- B. Use the Http Worker Request class.
- C. Use the Web application's master page.
- D. Parse the User Agent string in Page\_Load.

---

**Answer: A**

---

---

**Question: 12**

---

You are designing an ASP.NET 4 Web application that will integrate third-party components. You need to minimize the security risks of using these components. Which approach should you recommend?



- A. Apply role-based security with declarative checks.
- B. Store the components in the global assembly cache.
- C. Use the third-party components on a separate server.
- D. Use an appropriately permitted App Domain for each component.

---

**Answer: D**

---

---

**Question: 13**

---

You are designing an ASP.NET Web application. You are implementing the ASP.NET membership and profile providers to do the following:

- Support retrieval of user passwords within the ASP.NET Web application
- Access profile data that is stored in two or more Microsoft SQL Server tables

You need to ensure that the Web application is properly configured to interact with the providers. Which approach should you recommend?

- A. Use encrypted passwords, and develop a custom profile provider.
- B. Use encrypted passwords and the built-in SqlProfileProvider.
- C. Use hashed passwords, and develop a custom profile provider.
- D. Use hashed passwords and the built-in SqlProfileProvider.

---

**Answer: A**

---

---

**Question: 14**

---

You are designing a user input form that is part of an ASP.NET Web Forms application. You need to ensure that users cannot attack the Web server by submitting invalid data. Which approach should you recommend?

- A. Install a certificate on the Web server, and force all Web traffic to use SSL.
- B. Write an on Submit Java Script handler that validates all form input
- C. Write an on Submit JavaScript handler that URL-encodes all data that is passed to the server.
- D. Write an On Click method for the Submit button that rejects form submissions that contain invalid data

---

**Answer: D**

---

---

**Question: 15**

---

You are designing an ASP.NET MVC 2 Web application for a customer's extranet site. You need to allow only requests that originate from the customers intranet IP address range to access the application, and you must redirect other access requests to the customers Web site. Which approach should you recommend?

- A. Configure the IIS Request Filter module to filter requests.
- B. Configure IIS to reject requests from outside the specified IP address range.
- C. Configure the IIS URL Rewrite module to redirect requests from outside the specified IP address range to the public Web site.
- D. Design the default controller and action to check the IP address and to redirect requests from outside the specified IP address range to the public Web site.

---

**Answer: C**

---

---

**Question: 16**

---

You are designing an ASP.NET Web Forms application that uses a database containing user names and hashed passwords for authentication. The Web application includes a login form in which users type their user names and passwords. You need to design a strategy to ensure that the user's login credentials cannot be stolen through a man-in-the-middle attack. Which approach should you recommend?

- A. Install a certificate on the Web server, and force the login form to use SSL.
- B. Write an on Submit JavaScript handler that hashes the password before the password is submitted to the server.
- C. Write an On Click method for the Submit button that hashes the password before the password is compared with the password value that is stored in the database.
- D. Write an on Submit JavaScript handler that URL-encodes the password before the password is passed to the server.

---

**Answer: A**

---

---

**Question: 17**

---

You are implementing additional functionality within an existing ASP.NET 4 Web Forms Web site project by using ASP.NET MVC2. You need to design a Web site project configuration that supports Web Forms and ASP.NET MVC 2 in the same Microsoft Visual Studio 2010 project. Which two approaches should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Convert the Web site project to a Web application.
- B. Convert the Web site project to an ASP.NET MVC 2 application.
- C. Modify the T4 templates to support ASP.NET Web Forms.
- D. Reference the ASP.NET MVC 2 assemblies in the application configuration file.

---

**Answer: A, D**

---

---

**Question: 18**

---

You are designing a monitoring plan for a multi-tier ASP.NET Web application. The Web application uses multiple Web servers and a database server. You plan to use a dedicated monitoring server. You need to send an alert when any application server stops responding. Which approach should you recommend?

- A. Run a process on the monitoring server that periodically sends a request to each application service. Send an alert if a response is not received for any request.
- B. Run a process on each Web server that logs activity to a database on the monitoring server. Run a process on the monitoring server that periodically checks the monitoring database and sends an alert if any service stops logging.
- C. Use AJAX to log user actions on each Web page to a database on the monitoring server. Run a process on the monitoring server that periodically checks the monitoring database and sends an alert if there is an interruption in Web page activity.
- D. Use Microsoft Message Queuing (MSMQ) to send a message to the monitoring server in the Load event of the Web application's master page. Run a process on the monitoring server that polls for MSMQ messages and sends an alert if any server stops sending messages.

---

**Answer: A**

---

---

**Question: 19**

---

You are designing an ASP.NET Web application that will queue e-mail messages in a database. A Windows service will process the queue and send the messages. The Web application will be hosted on a server that hosts several other applications. The server cannot support additional processors or memory. You estimate that the Web application usage will increase by 10 percent every month. You need to ensure that the delivery of high-priority messages will not be delayed as the Web application usage increases. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Process the high-priority messages first.
- B. Use a shared memory connection to the database.
- C. Modify the Windows service to handle multiple threads.
- D. Run the Windows service on a server that is separate from the Web application host server.

---

**Answer: A, D**

---

---

**Question: 20**

---

You are designing a process for deploying an ASP.NET MVC 2 Web application to IIS 6.0. You need to ensure that the Web application properly handles Web requests. Which approach should you recommend?

- A. Configure IIS to map all requests to aspnet\_isapi.dll by using a wildcard script map.
- B. Configure IIS to map all requests to aspnet\_wp.exe by using a wildcard script map.
- C. Modify the Web application to route all requests to an HttpHandler class.
- D. Modify the Web application to route all requests to an HttpModule class.

---

**Answer: A**

---

---

**Question: 21**

---

You are designing a RESTful ASP.NET Web application. You have the following requirements:

- Retain state between requests.
- Associate a request with a session.
- Do not require the use of cookies.

You need to ensure that your design meets the requirements. Which approach should you recommend?

- A. Disable View State by using the @ Page directive
- B. Configure the application to use cookieless session state
- C. Configure the application to use the InProc session state mode
- D. Register a custom Page Adapter class that provides a Session State Page Per sister.

---

**Answer: B**

---

---

**Question: 22**

---

You are designing an ASP.NET Web Forms application. You expect the application to have high traffic. You plan to use a Web farm to balance the application load across several Web servers. You have the following requirements:



- Use round-robin load balancing.
- Do not use persistent storage for session data.

You need to ensure that your design meets the requirements. Which configuration should you recommend?

- A. Use cookieless session state.
- B. Use the InProc session state mode.
- C. Use the SQLServer session state mode.
- D. Use the StateServer session state mode.

---

**Answer: D**

---

---

**Question: 23**

---

You are designing an ASP.NET Web application. The Web application uses a Menu control to display either a menu of public and private pages to authorized users or a menu of only public pages to visitors. You need to ensure that the menu options and URLs of the private pages are not available to unauthorized users. Which approach should you recommend?

- A. Use the Page\_Init method to add to the Menu control only pages that the user is authorized to view
- B. Use the Page\_Load method to add to the Menu control only pages that the user is authorized to view
- C. Use a JavaScript window.onload event handler to hide the private pages from the list of pages shown on the menu
- D. Use a JavaScript document ready event handler to hide the private pages from the list of pages shown on the menu

---

**Answer: B**

---

---

**Question: 24**

---

You are designing an ASP.NET Web application. You have the following requirements:

- The application must be usable in partially connected scenarios.
- Data that is entered into the application offline must be synchronized with the server the next time the application is online.

You need to design the application to meet the requirements. What should you use?

- A. jQuery
- B. ASP.NET AJAX
- C. WCF Data Services
- D. Microsoft Silverlight

---

**Answer: D**

---

---

**Question: 25**

---

You are designing an ASP.NET Web application. You have the following requirements:

- Perform rapid development.
- Maintain cross-browser compatibility.
- Do not require client-side installations.

You need to recommend a client-side technology that meets the requirements. Which two technologies could you recommend? (Each correct answer presents a complete solution. Choose two.)

- A. jQuery
- B. ASP.NET AJAX
- C. Microsoft Silverlight
- D. Microsoft Visual Basic Scripting Edition (VBScript)

---

**Answer: A, B**

---

---

**Question: 26**

---

You are designing an ASP.NET Web application to manage and display sensitive information stored in a Microsoft SQL Server database. The database also provides authorization information for users. All Web pages that display sensitive information require an authenticated login. There is no visitor access to these pages. You have the following requirements:

- Separate authorization logic from the application.
- Prevent the application from directly accessing the database server.

You need to design a data access and authorization solution. Which approach should you recommend?

- A. Use a WCF service.
- B. Use a separate library.
- C. Use SQL XML Services.
- D. Use stored procedures.

---

**Answer: A**

---

---

**Question: 27**

---

You are designing an ASP.NET Web application for online image editing. Users can upload images to the Web application and edit those images by using utilities provided by the application. Some utilities are processor intensive and should be offloaded to a Graphics Processing Unit (GPU). Other utilities require the use of proprietary algorithms that must be performed on the server. You need to design a solution for minimizing bandwidth usage and Web server response times during image processing, while providing a responsive application. Which two approaches should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Perform server-side image processing on the Web server
- B. Perform server-side image processing on a dedicated server.
- C. Perform client-side image processing by using ASP.NET AJAX.
- D. Perform client-side image processing by using Microsoft Silver light.

---

**Answer: B, D**

---

---

**Question: 28**

---

You are designing a testing methodology for an ASP.NET MVC 2 Web application. The application has a rich domain model that represents the logic and the data of the business. A facade over the domain model provides a simplified API that is used by the controllers. A data access layer beneath the domain model is used by the domain model to handle data storage and retrieval. You have the following requirements:

- Centralize business rules.
- Directly validate the accuracy of the business rules.

You need to design tests against the appropriate layer to meet the requirements. Which layer should you

recommend?

- A. the controllers
- B. the domain model
- C. the data access layer
- D. the domain model facade

---

**Answer: B**

---

---

**Question: 29**

---

You are designing a testing methodology for an ASP.NET MVC 2 Web application. You have the following application testing requirements:

- Verify that security issues are identified as early within the request as possible.
- Verify that the effectiveness of input corruption is minimized.

You need to meet the application testing requirements. Which methodology should you recommend?

- A. Design tests against the model.
- B. Design tests against the controllers.
- C. Design tests against the client browser.
- D. Design tests against the data access layer.

---

**Answer: B**

---

---

**Question: 30**

---

You are designing a plan to scale an ASP.NET Web application to support up to 20,000 concurrent users. Application usage statistics indicate that many queries against the database retrieve data that does not change frequently. You need to reduce database round trips for static data. Which approach should you recommend?

- A. Use session state
- B. Use the application cache
- C. Use SQL Server replication
- D. Use multiple active result sets

---

**Answer: B**

---

---

**Question: 31**

---

You have an ASP.NET Web application that displays charts that are generated daily from data in a Microsoft SQL Server database. Each chart is implemented as a user control that displays data retrieved from the database. Data retrieval and chart generation consume a significant amount of resources. Users of the Web application generate unique reports that contain one or more chart controls. Each chart is common to many reports. You need design a solution to improve the performance of the Web server. Which approach should you recommend?

- A. Use page caching.
- B. Use fragment caching.
- C. Use the application cache.
- D. Use SQL cache dependency.

---

**Answer: B**

---

---

**Question: 32**

---

You are designing an ASP.NET Web application that has common navigation and layout elements on all pages. You have the following requirements:

- Maintain common elements in a single location.
- Ensure that common elements can be modified and nested without redeploying the Web application.
- Allow developers to customize the object model from individual pages.

You need to recommend a solution that can be specified at the application, folder, or page level. What should you recommend?

- A. Use a page base type.
- B. Use a master page.
- C. Use a server control.
- D. Use a theme.

---

**Answer: B**

---

---

**Question: 33**

---

You are designing an ASP.NET Web application that allows user input. You have the following requirements:

- Use client-side state management.
- Prevent users from accidentally modifying data.
- Automatically encode data.
- Preserve data during a page postback.

You need to recommend the appropriate type of state management. Which type should you recommend?

- A. view state
- B. the query string
- C. a hidden field
- D. session state

---

**Answer: A**

---

---

**Question: 34**

---

You are evaluating an ASP.NET Web application that includes three methods:

- Calculate () performs CPU-intensive calculations on the server.
- GetData() retrieves data from a server-side data store and returns an XML file.
- WriteData() receives an XML file and writes data from the file to a server-side data store.

You need to recommend an approach for maximizing server throughput. What should you recommend?

- A. Asynchronous processing for the GetData() and WriteData() methods.
- B. Synchronous processing for the WriteData() and Calculate() methods.
- C. Synchronous processing for the GetData() and WriteData() methods.
- D. Asynchronous processing for the GetOata() and Calculate() methods.

---

**Answer: A**

---

---

**Question: 35**

---

You are redesigning an existing three-tier ASP.NET Web application that is deployed to a Web server, an application server, and a database server that runs Microsoft SQL Server 2008. Usage has increased significantly. The application has become slow and occasionally times out. Health monitoring logs indicate that the data access logic on the application server is consuming the majority of the CPU resources. You need to recommend an approach for addressing the scalability and reliability issues. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Move the application tier to a Web farm.
- B. Partition the tables and indexes in the database.
- C. Use a clustered database server configuration.
- D. Move the Web tier to a Web farm.

---

**Answer: A, C**

---

---

**Question: 36**

---

You are designing an ASP.NET MVC 2 Web application that will contain reusable markup. The Web application must read data from the TempData dictionary. You need to recommend a solution that allows the Web application to pass data between pages by using the TempData dictionary. What should you recommend?

- A. Design a view user control and enable Session state.
- B. Use a Substitution control and enable Session state.
- C. Use a Substitution control and enable ViewState.
- D. Design a view user control and enable ViewState.

---

**Answer: A**

---

---

**Question: 37**

---

You are designing a data access service backed by Microsoft SQL Server. Other developers will use your service as a third-party service. You have the following requirements:

- To reduce maintenance cost, you must write the minimal amount of code required for fulfilling the goals.
- The service must function with Microsoft and non-Microsoft technologies.
- The service must implement the WS-Security standards.

You need to design the service to meet the requirements. Which approach should you recommend?

- A. Use a WCF service with multiple bindings.
- B. Use an .ashx file to return an XML response over HTTPS.
- C. Use SQL Server XML Web services.
- D. Use an ASP.NET Web service.

---

**Answer: A**

---

---

**Question: 38**

---

You are adding functionality to an ASP.NET MVC 2 Web application. You have the following requirements when passing form data to the server:

- Provide a simple way to map posted form values to a custom class object.
- Control the deserialization of custom class objects that are passed to the server.

You need to design the application to meet the requirements. Which approach should you recommend?

- A. Implement AJAX data templates.
- B. Use ASP.NET Dynamic Data.
- C. Implement model binding.
- D. Use a built-in HtmlHelper extension method.

---

**Answer: C**

---

---

**Question: 39**

---

You are designing an ASP.NET MVC 2 Web application. The Web application must meet the following requirements:

- Validate all user input for a class named Customer.
- Perform client-side and server-side validation.

You need to recommend an approach for validating user input. What should you recommend?

- A. Add DataAnnotations attributes to each property in the Customer class. Associate all rendered elements with a validation group.
- B. Use only strongly typed HTML helpers. Call the `Html.ValidationMessageFor()` method for each property in the Customer class.
- C. Add DataAnnotations attributes to each property in the Customer class. Call the `Html.EnableClientValidation()` method.
- D. Use ASP.NET validation server controls. Call the `Html.EnableClientValidation()` method.

---

**Answer: C**

---

---

**Question: 40**

---

You are supporting an ASP.NET Web application. The Web application occasionally shuts down unexpectedly in the production environment. You cannot reproduce the problem in your local environment. You need to design a strategy to ensure that you can immediately diagnose the problem without affecting the performance of the production environment. Which approach should you recommend?

- A. Use ASP.NET health monitoring.
- B. Use remote debugging against the hosting Web server process.
- C. Use local debugging against the hosting Web server process.
- D. Use ASP.NET tracing.

---

**Answer: A**

---

---

**Question: 41**

---

An ASP.NET Web application is deployed on a single Web server. Web application state for client requests is stored in a Microsoft SQL Server 2008 database. The Web application must meet the following requirements:

- Tolerate a Web server failure.



- Scale gracefully to accommodate a rapid load increase.

You need to recommend an approach for accommodating a load increase. What should you recommend?

- A. Upgrade the CPU, memory, and disk space of the existing Web server.
- B. Transfer the Web application to a load-balanced Web farm.
- C. Partition the data in tables across multiple servers.
- D. Set up a Web garden for the deployed application on the existing Web server.

---

**Answer: B**

---

---

**Question: 42**

---

You are designing an ASP.NET Web application in Microsoft Visual Studio 2010. You plan to deploy the application to multiple branch offices within your company. Each branch office requires different settings for SQL Server connections. You need to centrally manage the automatic configuration for each branch deployment. Which two approaches could you recommend? (Each correct answer presents a complete solution. Choose two.)

- A. Store the connection strings in the database.
- B. Use MSDeploy.
- C. Use a separate web.config file for each branch office.
- D. Use configuration transformations.

---

**Answer: B, D**

---

---

**Question: 43**

---

You are designing the deployment strategy for an ASP.NET Web application. You need to recommend an approach for displaying a maintenance notice to users while deploying a new version of the Web application. What should you recommend?

- A. Place a file named app\_offline.aspx in the root of the Web application folder.
- B. In the Web.config file, under the system.web/httpModules element, add a clear element.
- C. In the Web.config file, under the system.web/httpRuntime element, set the enable attribute to false.
- D. Place a file named app\_offline.htm in the root of the Web application folder.

---

**Answer: D**

---

---

**Question: 44**

---

You are designing an ASP.NET MVC 2 Web application for a customer's extranet site. You need to allow only requests that originate from the customer's intranet IP address range to access the application, and you must redirect other access requests to the customer's Web site. Which approach should you recommend?

- A. Design the default controller and action to check the IP address and to redirect requests from outside the specified IP address range to the public Web site.
- B. Configure the IIS URL Rewrite module to redirect requests from outside the specified IP address range to the public Web site.
- C. Configure IIS to reject requests from outside the specified IP address range.
- D. Configure the IIS Request Filter module to filter requests.

---

**Answer: B**

---

---

**Question: 45**

---

You are designing an ASP.NET Web application. A page of the Web application will allow users to post comments and view comments posted by other users. You need to recommend an approach for preventing the Web application from storing malicious content. What should you recommend?

- A. In the page code-behind, add a ValidateInput attribute.
- B. On the page, set the ValidateRequest property of the @ Page directive to false. Use the HtmlAttributeEncode() method on submitted content before storing the content in the database.
- C. On the page, set the ValidateRequest property of the @ Page directive to false. Use the HtmlEncode() method on submitted content before storing the content in the database.
- D. In the page code-behind, add a Validation attribute.

---

**Answer: C**

---

---

**Question: 46**

---

You are designing an ASP.NET Web application that displays daily sales information. The sales information is stored in a large Microsoft SQL Server database. The database information is updated each night. During the day, people use the Web application to display a set of standard sales reports based on the latest database information. The SQL queries that are required to retrieve the database information can take from 20 to 30 seconds to execute. You need to design the application to ensure that pages usually load in no more than 5 seconds. Which two approaches could you recommend? (Each correct answer presents a complete solution. Choose two.)

- A. Use AJAX to retrieve the database information
- B. Use a service that proxies the database queries and caches the results
- C. Use SQL Server replication
- D. Use a control that retrieves and displays the database information

---

**Answer: A, B**

---

---

**Question: 47**

---

You are designing an ASP.NET Web application by using Microsoft Visual Studio 2010. The Web application uses dynamic HTML (DHTML). You need to ensure that the application functions properly on multiple browser platforms without requiring the installation of a client-side component. Which two approaches could you recommend? (Each correct answer presents a complete solution. Choose two.)

- A. Use Microsoft visual Basic Scripting Edition (VBScript).
- B. Use jQuery.
- C. Use Microsoft Silverlight.
- D. Use the ASP.NET Ajax Library.

---

**Answer: B, D**

---

---

**Question: 48**

---

You are modifying an existing ASP.NET Web application. Each page of the Web application includes a navigation bar and a print button. You have the following requirements:

- Enable users to print pages of the Web site without printing the navigation bar.
- Do not create a separate version of the page formatted for printing.
- Leverage the existing print button on each page.

You need to recommend an approach that meets the requirements. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Add an OnClientClick event handler to the print button to call the window.print() function.
- B. Add an OnClick event handler to the print button to set the Response.ContentType property to style/print.
- C. Add the PrintingPermission attribute to the code-behind page class.
- D. In the header, add a style sheet tag that sets the media attribute to print.

---

**Answer: A, D**

---



---

### Question: 49

---

You are designing an ASP.NET Web application. Each page of the Web application will have a common master page and derive from a common base page class. You have the following requirements:

- Support multiple languages for user interface labels.
- Enable automatic detection of language based on browser language settings.

You need to recommend an approach to support localization. What should you recommend?

- A. In the Web.config file, add a globalization element with the uiCulture attribute set to auto.
- B. In the code-behind for the master page, override the OnInit() method. Set the Thread.CurrentThread.CurrentUICulture property based on the value of the Request.Browser.Capabilities["preferredLanguage"] dictionary entry.
- C. In the Web.config file, add a globalization element with the responseEncoding attribute set to auto.
- D. In the code-behind for the base page, override the InitializeCulture() method. Set the Thread.CurrentThread.CurrentUICulture property based on the value of the ViewState["Accept-Language"] dictionary entry.

---

**Answer: A**

---



---

### Question: 50

---

You have a Web application that has been migrated from ASP.NET 3.5 to ASP.NET 4. While testing the migrated Web application, developers notice that the non-input Web controls with the property Enabled="false" are rendering as enabled. You need to ensure that the controls in the migrated Web application render correctly, and that other Web applications hosted on the same Web server are not affected by the solution. Which approach should you recommend?

- A. Use the controlRenderingCompatibilityVersion element of the pages section of the machine.config file.
- B. Use the controls element of the pages section of the migrated application's web.config file.
- C. Use the controlRenderingCompatibilityVersion element of the pages section of the migrated application's web.config file.
- D. Use the controls element of the pages section of the machine.config file.

---

**Answer: C**

---

---

**Question: 51**

---

You are designing a method for collecting information regarding usage of new functionality within an ASP.NET Web application. You have the following requirements:

- Usage data must be stored in a database for easy reporting.
- The application must not include code relating to usage data.

You need to design a strategy that meets the requirements. Which approach should you recommend?

- A. Use ASP.NET tracing
- B. Use the RequestStartedmethod
- C. Use remote debugging
- D. Use ASP.NET health monitoring

---

**Answer: D**

---

---

**Question: 52**

---

You have an ASP.NET Web application that is deployed on multiple, identical Web servers. The Web servers retrieve data from multiple, identical Microsoft SQL Server databases. Each user maintains an active Web application session during the entire business day. You notice that some Web servers consume 100 percent of their CPU resources and return timeout errors, while other Web servers are idle. You need to design a plan to load-balance the Web application across the available Web servers. Which approach should you recommend?

- A. Use per-request load balancing with StateServer session state.
- B. Use affinity load balancing with SQLServer session state.
- C. Use per-request load balancing with InProc session state.
- D. Use affinity load balancing with StateServer session state.

---

**Answer: A**

---

---

**Question: 53**

---

You are designing the deployment process for a new ASP.NET Web application. You need to ensure that the application is protected from modification after deployment. Which approach should you recommend?

- A. Use the ASP.NET Compilation tool.
- B. Use a Web Deployment project.
- C. Use the Web Deployment tool.
- D. Use MSDeploy.

---

**Answer: A**

---

---

**Question: 54**

---

You are designing an ASP.NET Web application that will be deployed both to a server that runs IIS 6 and to a server that runs IIS 7.0. The Web application must meet the following requirements:

- Log all unhandled exceptions.
- Write exception details to a custom error log.

- When an exception occurs, write the user credentials to a custom error log.
- You need to recommend an approach for handling errors. What should you recommend?

- A. Create an error handler for the `HttpApplication.LogRequest` event.
- B. In the `customErrors` element of the `Web.config` file, set the `defaultRedirect` attribute to `errors.htm`.
- C. In the `customErrors` element of the `Web.config` file, set the `mode` attribute to `On`.
- D. Create an error handler for the `Application_Error` event.

---

**Answer: D**

---

---

**Question: 55**

---

You are reviewing an ASP.NET Web application that uses dynamic SQL. The Web application validates user credentials against a Microsoft SQL Server 2008 database by using Forms authentication and hashing the password. You need to recommend an approach for testing whether users can gain elevated access to the Web application. What should you recommend?

- A. Perform SQL injection tests
- B. Perform penetration tests for cross-site scripting
- C. Perform Web tests that supply valid and invalid passwords
- D. Perform unit tests that supply valid and invalid passwords

---

**Answer: A**

---

---

**Question: 56**

---

You are designing an ASP.NET Web application that stores data in a Microsoft SQL Server 2008 database on a remote server. You must meet the following requirements:

- Ensure that users' actions can be traced on each server by using the security audit log.
- Minimize the risk of server components executing in the user's context.

You need to recommend an approach for accessing the database. What should you recommend?

- A. Use Basic authentication and set the `Integrated Security` property of the SQL Server connection string to `SSPI`.
- B. Use Basic authentication and impersonation to configure a trusted subsystem between servers.
- C. Use Windows authentication and set the `Trusted Connection` property of the SQL Server connection string to `true`.
- D. Use Windows authentication and impersonation to configure constrained delegation between servers.

---

**Answer: D**

---

---

**Question: 57**

---

You are designing an ASP.NET Web application. The Web application must allow users to authenticate by using LDAP on a Web form. You need to recommend an authentication model. What should you recommend?

- A. Change the authentication mode to Windows authentication, and implement a custom authentication provider.
- B. Change the authentication mode to Forms authentication, and use the `ClientWindowsAuthenticationMembershipProvider` class.
- C. Change the authentication mode to Windows authentication, and use the `ActiveDirectoryMembershipProvider` class.

D. Change the authentication mode to Forms authentication, and use the `ActiveDirectoryMembershipProvider` class.

---

**Answer: D**

---

---

**Question: 58**

---

You are designing an ASP.NET Web Forms application. The Web application has a heavy reliance on view state. You are designing the Web application for use in regions that have limited or low-bandwidth connectivity. You have the following requirements:

- Decrease bandwidth requirements.
- Prevent any user from obtaining any part of the view state.
- Do not require changes to existing pages, user controls, or code-behind files that rely on the view state.

You need to ensure that the Web application meets these requirements. Which approach should you recommend?

- A. Register a custom `PageAdapter` class that provides a `SessionStatePagePersister`.
- B. Register a custom `PageAdapter` class that stores the view state in a cookie.
- C. Configure IIS to use HTTP compression.
- D. Configure IIS to use SSL.

---

**Answer: A**

---

Explanation:

Reference:

<http://professionalaspnet.com/archive/2006/12/09/Move-the-ViewState-to-Session-and-eliminate-page-bloat.aspx>

---

**Question: 59**

---

You are designing an ASP.NET Web application. The Web application must instruct proxy servers between the server and the browser to not cache content. You need to recommend an approach for instructing the proxy servers. What should you recommend?

- A. Use the `Response.Cache.SetCacheability()` method with a value of `HttpCacheability.ServerAndPrivate`.
- B. Use the `Response.Cache.SetVaryByCustom()` method with a value of `no-proxy`.
- C. Use the `Response.Cache.SetNoTransforms()` method.
- D. Use the `Response.Cache.AppendCacheExtensionQ` method with a value of `no-proxy`.

---

**Answer: A**

---

---

**Question: 60**

---

You are designing an ASP.NET Web application. You need to ensure that users can display the content of the application in a language that they select. Which two approaches should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Use language-specific master pages.
- B. Use `CurrentUICulture`.
- C. Use `CurrentCulture`.
- D. Use language-specific resource files.



---

**Answer: B, D**

---

---

**Question: 61**

---

You are designing an ASP.NET Web application. A page of the Web application will contain a databound ListView control. You need to recommend a strategy for accessing individual rows within the ListView control from client-side script based on the value in a specific data field. What should you recommend?

- A. On the ListView control, set the ClientIdMode property to Static and set the ClientIdRowSuffix property to the name of the data field.
- B. On the @> Page directive, set the SmartMavigation property to True and set the ClientIDMode property to AutoID.
- C. On the ListView control, set the ClientIdMode property to Predictable and set the ClientIdRowSuffix property to the name of the data field.
- D. On the @ Page directive, set the AspCompat property to True and set the ClientIDMode property to Predictable.

---

**Answer: C**

---

---

**Question: 62**

---

You are designing an ASP.NET Web application. You have the following requirements:

- Relational database tables must automatically map to .NET classes.
- The data access layer must be able to target database engines other than Microsoft SQL Server.

You need to recommend a data access technology. Which technology should you recommend?

- A. direct ADO.NET calls
- B. Entity Framework 4
- C. LINQ to SQL
- D. .NET Framework Data Provider for OLE DB

---

**Answer: B**

---

---

**Question: 63**

---

You are designing an ASP.NET Web application. The Web application must meet the following requirements:

- Support REST without implementing custom URI templates.
- Allow CRUD functionality.

You need to recommend a data access strategy. What should you recommend?

- A. Use ASP.NET Web Services.
- B. Use SQL Server Service Broker.
- C. Use WCF Data Services.
- D. Use WCF Services.

---

**Answer: C**

---

---

**Question: 64**

---

You are designing a Windows Communication Foundation (WCF) service. The WCF service will support a common data access strategy for an ASP.NET 1.1 Web application and an ASP.NET 4 Web application. You have the following

requirements:

- Ensure that the WCF service complies with WS-\* standards.
- Enable backward-compatibility for clients that can consume only ASMX Web Services.

You need to recommend an endpoint and binding strategy for the WCF service. What should you recommend?

- A. multiple endpoints using BasicHttpBinding and WSHttpBinding
- B. multiple endpoints using NetTcpBinding and WSHttpBinding
- C. a single endpoint using NetMsmqBinding
- D. a single endpoint using NetTcpBinding

---

**Answer: A**

---

---

### Question: 65

---

You are designing an ASP.NET Web application that will be accessed by local intranet users. The Web application will store temporary data files locally. The Web server is running IIS 7.5. You have the following requirements:

- Temporary data file ownership must be set to the user account.
- Temporary data files stored locally must be accessible only to the authenticated user.

You need to recommend an approach for securing the temporary data files. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Set the default role provider to the WindowsTokenRoleProvider class,
- B. Enable Windows authentication.
- C. Set the Load User Profile setting to True in the application pool configuration.
- D. Enable ASP.NET impersonation.

---

**Answer: A, B**

---

---

### Question: 66

---

You are designing an ASP.NET MVC 2 Web application. The Web application will include a controller named AdminController. You need to recommend an approach for ensuring that the action methods of the AdminController controller are available only to the local Windows Administrator account. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Add the Authorize attribute to each action method in the AdminController controller.
- B. Read role information from the AuthorizationContext object.
- C. In the Web.config file, add an authorization element for the Web application.
- D. Read role information from the ConfigurationManager object.

---

**Answer: A, D**

---

---

### Question: 67

---

You deploy a medium-trust ASP.NET Web application to a Web server that runs IIS 7.0. The Web server hosts multiple Web sites. Web applications hosted on the Web server must not have access to the local resources of other Web applications hosted on the Web server. You need to recommend a deployment strategy. What should you recommend?

- A. Deploy each Web application in a separate application pool. Use the built-in ApplicationPoolIdentity account.
- B. Deploy each Web application in a separate application pool. Create and use a single custom account.
- C. Deploy all the Web applications in the built-in DefaultAppPool application pool. Set the Managed Pipeline Mode setting to Classic.
- D. Deploy all the Web applications in a single custom application pool.

---

**Answer: A**

---

---

**Question: 68**

---

You plan to upgrade a medium-trust Web application from ASP.NET 2.0 to ASP.NET 4. The Web application is hosted on a Web server that is running IIS 7.0. You have the following requirements:

- Support multiple permission sets in a single application domain.
- Honor the machine-level code access security policy.

You need to recommend an approach for preparing the Web application for the upgrade. What should you recommend?

- A. In the Web.config file, set the legacyCasModel attribute of the trust element to true.
- B. In the application pool settings, set the Load User Profile setting to True.
- C. In the application pool settings, set the Managed Pipeline Mode setting to Classic.
- D. In the Web.config file, set the processRequestInApplicationTrust attribute of the trust element to true.

---

**Answer: A**

---

---

**Question: 69**

---

You are planning a deployment process for a set of interrelated Web services. You need to ensure maximum availability of the Web services in the event of a hardware or software failure. Which approach should you recommend?

- A. Run each distinct service on a separate virtual machine (VM).
- B. Run each distinct service on two separate physical machines.
- C. Run each distinct service on two virtual machines (VMs) hosted on one physical machine.
- D. Run each distinct service on a separate physical machine.

---

**Answer: B**

---

---

**Question: 70**

---

You are designing the deployment strategy for an ASP.NET Web application that consists of multiple pages. The Web application will be deployed to a server that hosts multiple ASP.NET applications. The Web application design includes:

- Error pages named LoginErrors.htm and GenericErrorPage.htm.
- A subdirectory named Login that contains only the Login.aspx page.

You have the following requirements:

- Display the LoginErrors.htm page for all unhandled errors that are generated from the Login.aspx page.
- Display the GenericErrorPage.htm page for all other unhandled errors.

You need to recommend an approach for displaying the error pages. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Add the following XML element to the Machine.config file in the .NET Framework installation folder:  
`<customErrors defaultRedirect="LoginErrors.htm" />`
- B. Add the following XML element to the Machine.config file in the .NET Framework installation folder:  
`<customErrors defaultRedirect="GenericErrorPage.htm" />`
- C. Add the following XML element to the Web.config file in the Login directory:  
`<customErrors defaultRedirect="LoginErrors.htm" />`
- D. Add the following XML element to the Web.config file in the root application directory:  
`<customErrors defaultRedirect="GenericErrorPage.htm" />`

---

**Answer: A, B**

---



---

### Question: 71

---

You are designing a health monitoring strategy for an ASP.NET Web application. The Web application must raise failure events to correspond with key business process failures. You need to recommend an approach for ensuring that failure events can be consumed by the ASP.NET Health Monitoring framework. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Create a custom event class derived from the WebErrorEvent class.
- B. Create a custom event class derived from the WebFailureAuditEvent class.
- C. In the Web.config file, add an entry to the healthMonitoring/providers collection for the custom event class.
- D. In the Web.config file, add an entry to the healthMonitoring/eventMappings collection for the custom event class.

---

**Answer: A, D**

---



---

### Question: 72

---

You are designing the deployment strategy for an ASP.NET Web application. The database configuration string varies depending on the target environment. You have the following requirements:

- Deploy the application by using Web Deploy.
- Replace the connection string named AppDb with the appropriate value for each environment.

You need to recommend an approach for updating the AppDb connection string when deploying the application to the staging environment. Which two attributes should you add to the AppDb connection string entry in the Web.staging.config file? (Each correct answer presents part of the solution. Choose two.)

- A. xdt:Transform with the value "XPath(configuration/connectionStrings[@name='AppDb1'])"
- B. xdt:Locator with the value "XPath(configuration/connectionStrings[@name='AppDb'])"
- C. xdt:Locator with the value "Replace"
- D. xdt:Transform with the value "Replace"

---

**Answer: B, C**

---



---

### Question: 73

---

You are modifying an ASP.NET Web application that uses session state. The Web application is deployed to a Web farm. You have the following requirements:

- Provide a reliable failover mechanism for session state data.
- Provide persistent storage of session state data.

You need to recommend a session state mode that meets the requirements, What should you recommend?

- A. Use In-Process mode.
- B. Use SQL Server mode with a network load balanced Microsoft SQL Server database.
- C. Use State Server mode.
- D. Use SQL Server mode with a clustered Microsoft SQL Server database instance.

---

**Answer: D**

---

---

**Question: 74**

---

An ASP.NET Web application contains a class named Money. The Money class has properties named Value and Currency. The Locals window of the Microsoft Visual Studio 2010 IDE currently displays the Value and Currency properties only when the Money object is expanded. You have the following requirements:

- Display the Value and Currency property values in the Locals window.
- Display the property values without requiring the developer to expand the Money object.

You need to recommend an approach for modifying the Money class to meet the requirements. What should you do?

- A. Apply the DebuggerDisplay attribute to the class.
- B. In the constructor, create a new instance of the LocalItemDescription class for each of the Value and Currency properties.
- C. In the Value and Currency property setters, call the Debug.WriteLine() method.
- D. Modify the class to inherit from the LocalVariableInfo class. Override the IsPinned property to return true.

---

**Answer: A**

---

---

**Question: 75**

---

An ASP.NET Web application connects to a Microsoft SQL Server 2008 database. Multiple users access the database. The Web.config file includes a database connection string. The Web application uses Windows authentication and impersonation. Anonymous access is turned off. You need to recommend an approach for pooling database connections between users. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. In the connection string, set the Integrated Security parameter to true.
- B. In the connection string, specify a user name and password.
- C. Do not explicitly close connections.
- D. Explicitly close connections.

---

**Answer: A, C**

---

---

**Question: 76**

---

An ASP.NET Web application hosted on a remote server throws NullReferenceException exceptions that are not handled. The stack trace does not include line numbers. The Microsoft Visual Studio 2010 remote debugging tools are installed on the remote server. You need to recommend an approach for identifying the line of code that is causing the exception. What should you recommend?

- A. Deploy the PDB files for the assemblies to the remote server. Inspect the Application event log.

- B. Set the project-level Enable Code Analysis on Build property to true. Inspect the Application event log.
- C. In the Web.config file, set the debug value to true. Attach the debugger to the remote worker process.
- D. Set the project-level Optimize code property to false. Attach the debugger to the remote worker process.

---

**Answer: A**

---

---

**Question: 77**

---

You are designing an exception-handling strategy for an ASP.NET Web Forms application. The Web application will use Windows authentication. The Web application must meet the following requirements:

- Display a user-friendly error message to users.
- Display a detailed error message to server administrators.

You need to recommend an approach for handling exceptions. What should you recommend?

- A. Add a HandleError attribute to each controller class.
- B. On the assembly, add a SecureRules attribute with the security rule set configured to level 2.
- C. In the Application\_Error event handler, wrap the exception in an ExternalException exception. Re-throw the exception if the user is not a member of the Administrators group.
- D. In the customErrors element of the Web.config file, set the mode attribute to remoteOnly.

---

**Answer: B**

---

---

**Question: 78**

---

An existing ASP.NET Web application uses third-party server controls. The third-party vendor releases a new version of the server controls. You need to recommend an approach for testing whether the new versions of the server controls break the existing Web application. What should you recommend?

- A. Performance testing on the third-party server controls
- B. Load testing on the third-party server controls
- C. Component testing on the Web application
- D. Regression testing on the Web application

---

**Answer: D**

---

---

**Question: 79**

---

You are designing an ASP.NET Web application that will be developed by using Microsoft Visual Studio 2010. The application will interact with a Microsoft SQL Server database. The data access layer of the application must meet the following requirements:

- Support rapid application development techniques.
- Allow the underlying database schema to change without affecting the object model.
- Contain strongly typed data objects.

You need to develop the data access layer.

Which data access technology should you recommend?

- A. ADO.NET DataTables
- B. ADO.NET DataSet
- C. Entity Framework



## D. WCF Data Services

---

**Answer: A**

---

---

**Question: 80**

---

You are designing an ASP.NET MVC 2 Web application that requires each user to register a user name and password before accessing restricted content. You have the following requirements for user registration:

- When the focus leaves the user name input field, validate that the user name does not already exist.
- Display validation results before submitting the form.

You need to recommend a data validation strategy. What should you recommend?

- A. Use jQuery to access server-side validation code.
- B. Use the Required attribute to annotate the user name property of the model. Call the `Html.EnableClientValidation()` method from the view.
- C. Use an UpdatePanel control to access server-side validation.
- D. Implement the `IValidator` interface on the model.

---

**Answer: A**

---

---

**Question: 81**

---

You are designing a data validation strategy for an ASP.NET Web application. A page of the Web application includes multiple Panel controls. Each panel contains input controls, validator controls, and a Submit button. When a user clicks a Submit button, the Web application must validate only the values of the input controls on the panel containing that Submit button. You need to recommend an approach for validating the values. What should you recommend?

- A. Change each Panel control to an UpdatePanel control. Set a `PostBackTrigger` for the Submit button on the panel.
- B. Change each Panel control to an EditorZone control.
- C. For each panel, set the `ValidationGroup` property on all the validator controls and the Submit button to a unique value for the panel.
- D. For each panel, set the `ValidationGroup` property on the Submit button to a unique value and add a `ValidationSummary` control with the same value.

---

**Answer: C**

---

---

**Question: 82**

---

You are designing a data access strategy for an ASP.NET Web application. You plan to expose an existing data source by using WCF Data Services. You need to recommend an approach to ensure that CRUD operations are possible. What should you recommend?

- A. Implement the `IQueryable` and `IUpdatable` interfaces on data source entities.
- B. Implement the `IEnumerable` and `IEditableObject` interfaces on data source entities.
- C. Implement the `ILookup` and `IUpdatable` interfaces on data source entities.
- D. Implement the `IContainer` and `IEditableObject` interfaces on data source entities.

---

**Answer: A**

---

---

**Question: 83**

---

You are designing an ASP.NET Web application. Pages of the Web application will share a common layout. Different business logic will be executed based on user input. You have the following requirements:

- Use view state to maintain data between postbacks.
- Reuse presentation logic across multiple pages.

You need to recommend an approach that meets the requirements. What should you recommend?

- A. Use ASP.NET MVC 2.
- B. Use an ASP.NET Web Forms-based framework.
- C. Use an ASP.NET Web Services application.
- D. Use ASP.NET AJAX.

---

**Answer: B**

---

---

**Question: 84**

---

You are designing an ASP.NET MVC 2 Web application. When the Web application is accessed through the . . . /Products/Categories URL, it will display a list of products sorted by category. You have the following requirements:

- The Web application design must be loosely coupled.
- The Web application must support unit testing of the data layer code.

You need to recommend a location for the code that maps and retrieves products from the data store. Which location should you recommend?

- A. A View class named ProductCategory
- B. A Controller class named ProductsController
- C. A Controller class named Products
- D. A Model class named ProductCategory

---

**Answer: D**

---

---

**Question: 85**

---

You are designing an ASP.NET MVC 2 Web application. The Web application will display information from remote third-party Windows Communication Foundation (WCF) services on each page.

You have the following requirements:

- Retrieve information from the WCF services.
- Specify a timeout period while retrieving information from third-party services.
- Cache responses from the third-party services for retrieval by multiple users.

You need to recommend an approach for retrieving information from the WCF service. What should you recommend?

- A. Use an asynchronous method.
- B. Implement the IHttpAsyncHandler interface on the models for the views.
- C. Implement the IAsyncResult interface on the models for the views.
- D. Use AJAX to asynchronously call the third-party services and display information.

---

**Answer: A**

---

---

**Question: 86**

---

You are designing an ASP.NET MVC 2 Web application. A page of the Web application will display data retrieved from a Web service. The Web service performance is unpredictable. You have the following requirements:

- Display a progress indicator while retrieving data.
- Display data in the same page from which it is retrieved.

You need to recommend a solution that meets the requirements. What are two possible solutions you could recommend? (Each answer presents a complete solution. Choose two.)

- A. Derive the controller from the AsyncController class.
- B. In the view, set the Page directive Async attribute to true.
- C. Use the jQuery.ajax() function.
- D. Use the Ajax.BeginForm() method.

---

**Answer: A, B**

---



---

**Question: 87**

---

You are conducting an architectural review of an existing ASP.NET Web application. The Web application uses only full-page postbacks, which degrades its performance. You have the following requirements:

- Extend existing controls by using AJAX functionality.
- Reduce the size of postbacks without modifying the existing controls.

You need to recommend an approach for meeting the requirements. What should you recommend?

- A. Create a user control that implements the IExtenderProvider interface.
- B. Create a server control derived from the ExtenderControl class.
- C. Create a user control that implements the IAsyncActionInvoker interface.
- D. Create a server control derived from the Substitution class.

---

**Answer: B**

---



---

**Question: 88**

---

You are designing an ASP.NET Web application that will support multiple display languages. You have the following requirements:

- Change server control settings based on the selected language.
- Enable strongly typed access to the resource objects.

You need to recommend a strategy for localizing server control properties. Which strategy should you recommend?

- A. Add the Localizable attribute to the control definitions in the code-behind. In the App\_LocalResources folder, create a resource file that contains localized values with keys named according to the <ControlId>.<PropertyName> format.
- B. Use implicit resource expressions and store the resource file in the App\_LocalResources folder.
- C. Use explicit resource expressions and store the resource file in the App\_GlobalResources folder.
- D. Wrap localized server controls with a Localize server control. In the App\_GlobalResources folder, create a resource file that contains localized values with keys named according to the <LocalizeId>.<ControlId>.<PropertyName> format.

---

**Answer: C**

---



---

**Question: 89**

---

You are designing an ASP.NET Web application that targets multiple browsers and form factors. Some devices do not support the markup produced by a third-party server control. You cannot modify the third-party server control. You need to recommend an approach for providing the correct markup for the problematic devices. What should you recommend?

- A. Derive a class from the third-party server control. In the new server control, override the `TemplateSourceDirectory` property to return a value pointing to a file containing the device-specific markup.
- B. Create an ASP.NET theme specific to each problematic device. In the page `PreRender` event, set the `Theme` property to the custom theme based on the value of the `Request.Browser.Type` property.
- C. In the page `PreRender` event, call the `Response.WriteSubstitution()` method with a delegate. In the delegate, populate the page with device-specific markup based on the value of the `Request.Browser.Type` property.
- D. Derive a class from `ControlAdapter` that produces device-specific markup. In the browser definition file, add an entry in the `controlAdapters` collection for each of the problematic devices. In the entry, point to the third-party server control and adapter type.

---

**Answer: D**

---

---

**Question: 90**

---

You are designing an ASP.NET Web application. A page of the Web application will use the ASP.NET Calendar server control. Users will select the type of calendar from a drop-down list named `CalendarType`. The `CalendarType` list contains cultural preferences. You need to recommend an approach for rendering the calendar control based on the selected cultural preference. What should you recommend?

- A. Create a `div` element and set its `lang` attribute to the selected `CalendarType` value. Put the calendar control inside the `div` element.
- B. Create a `Localize` control and set its `Mode` attribute to `Transform`. Put the calendar control inside the `Localize` control.
- C. In the page code-behind, override the `InitializeCultureQ` method and set the thread's `CurrentUICulture` property to a new instance of the `CultureInfo` class. Set the value of the `DateTimeFormatInfo.Calendar` property based on the `Request.Form` collection.
- D. In the page code-behind, override the `OnInit()` method and set the thread's `CurrentUICulture` property to a new instance of the `CultureInfo` class. Set the value of the `DateTimeFormatInfo.Calendar` property based on the `ViewState` dictionary.

---

**Answer: C**

---

---

**Question: 91**

---

You are designing an ASP.NET Web application. The Web application includes a section for sales pages. You need to ensure that the sales pages share a specific header and a specific footer that differ from those of all other pages in the application. Which approach should you recommend?

- A. Create the specific header and footer elements in the site's master page.
- B. Create separate usercontrols for the specific header and footer, and add each of the user controls to the site's master page.
- C. Create a sales subdirectory. Add a `master.aspx` page that contains the header and footer to the subdirectory, and then store all the sales pages in the subdirectory.
- D. Create a `sales.masterpage` that contains the header and footer and inherits from your site's master page, and then

use the master page in each sales page.

---

**Answer: D**

---



---

**Question: 92**

---

You are designing an ASP.NET Web application that will be accessed only by a proprietary user agent. The user agent is unable to read the default HTML encoding produced by the Web application. You need to recommend an approach for allowing the user agent to process the Web application output. What should you recommend?

- A. Create a class derived from System.Text.Encoder. In the Web.config file, add a pages element with the pageParserFilterType attribute set to the derived class type name.
- B. Create a class derived from HttpEncoder. In the Web.config file, add an httpRuntime element with the encoderType attribute set to the derived class type name.
- C. Create a class derived from HttpEncoder. In the browser definition file, add a capability element named httpEncoding, with the type attribute set to the derived class type name.
- D. Create a class derived from System.Text.Encoder. In the browser definition file, add a capability element named httpEncoding, with the type attribute set to the derived class type name.

---

**Answer: B**

---

**Case Study: 2**

**Case Study Name: CSHARP Adventure Works**

**Tab ID: 1**

**Tab ID Name: BACKGROUND**

**Tab ID Text:**

Adventure Works is a retail operation with facilities in English-speaking and Spanish-speaking countries. Adventure Works plans to begin selling its products online. As a first step, the company will develop a customer-facing shopping cart. You are a senior developer hired by the company to lead the development of the new solution.

**Tab ID: 2**

**Tab ID Name: BUSINESS REQUIREMENTS**

**Tab ID Text:**

Your solution must meet the following business requirements.

**Tab ID: 3**

**Tab ID Name: General**

**Tab ID Text:**

The Web application must support the English and Spanish languages, and must display all information in the end user's language and culture. The Web application must handle errors gracefully. If an error occurs, the Web application must send a notification.

**Tab ID: 4**

**Tab ID Name: User Interface**

**Tab ID Text:**

The Web application must support two groups of users: customers and administrators. The Web application must have a separate interface for each user group.

The customer-facing interface has the following associated requirements:

- Customers must create user accounts.
- The customer-facing interface must include the online store and a page that displays shopping cart content.

- Customers must submit orders from the shopping cart page.
- Customers must log in to user accounts to submit orders.
- Customers must be able to upload image files to the Web application.
- The online store must include products that can be customized with the image files uploaded by the customer.

The administrative interface has the following associated requirements:

- The administrative interface must include tools for managing inventory, users, and sales, and tools for viewing reports.
- Administrators must be able to change the appearance of the Web application for specific holidays without redeploying the application.

**Tab ID: 5**

**Tab ID Name: TECHNICAL REQUIREMENTS**

**Tab ID Text:**

Your solution must meet the following technical requirements.

**Tab ID: 6**

**Tab ID Name: Hardware**

**Tab ID Text:**

You must use only your existing hardware, which consists of three servers that run Windows Server 2008 R2. The Web application must be load balanced among the three servers.

**Tab ID: 7**

**Tab ID Name: Development Environment**

**Tab ID Text:**

The Web application must be developed by using Microsoft Visual Studio 2010 and ASP.NET 4. Debugging of server-side and client-side code must be performed by using Visual Studio 2010. A staging server will be used to validate all changes before deploying to production.

**Tab ID: 8**

**Tab ID Name: General**

**Tab ID Text:**

All solutions must be scalable.

All solutions must minimize bandwidth usage.

Techniques used for implementation must result in a codebase that is easy to maintain.

The application pool must be configured to run using the Network Service account.

Session state must be persisted between server farm restarts.

Changes that administrators make to the application's appearance must affect all images and styles across the entire application.

**Tab ID: 9**

**Tab ID Name: Security**

**Tab ID Text:**

The Web application must authenticate users by using Forms authentication.

The least-privileged NTFS permission level must be applied to the file system.

**Tab ID: 10**

**Tab ID Name: Coding**

**Tab ID Text:**

Server-side code and client-side code generated by developers must not be mixed. Error handling must be managed at a global level. All data must be represented as entity objects in a separate class library that will be available for future projects. The shopping cart content page must be developed by using a GridView control.

You have the following requirements for the use of classes:

Secured pages must inherit the CustomPage class.

- The CustomPage class must inherit from the Page class.
- The administration pages must inherit the CustomManagementPage class.



- The CustomManagementPage class must be derived from the CustomPage class.

**Tab ID: 11**

**Tab ID Name: File Storage**

**Tab ID Text:**

Certain types of files must be stored in specific folders on the web application server:

- Store all pages requiring authentication in a folder named Secured.
- Store all images uploaded by customers in a folder named Upload.

---

**Question: 1**

---

You need to design a solution for incorporating NTFS permissions in the Web application. Which two approaches should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Grant the Network Service account only Read permission to the root directory.
- B. Grant Read permission and Write permission to the root directory
- C. Grant the Network Service account Full Control permission to the Upload folder.
- D. Grant the Network Service account Read permission and Write permission to the Upload folder.

---

**Answer: A, D**

---

---

**Question: 2**

---

You need to design a solution for the protection of the pages in the Secured folder. Which approach should you recommend?

- A. Use Code Access Security.
- B. Use the Personalization API.
- C. Use Software Restriction Policies.
- D. Use the Authorization element of web.config.

---

**Answer: D**

---

---

**Question: 3**

---

You need to ensure that unauthorized users do not have access to the administration pages. Which approach should you recommend?

- A. Check whether the user has access in the Page\_Load method of every administration page by using the User, IsInRole("Admin") method.
- B. Override the OnInit event of the Custom Page class, and then check whether the user has access.
- C. Override the On Load event of the Custom Page class, and then check whether the user has access.
- D. Decorate the Custom Management Page class with the Principal Permission attribute, demanding access for the Admin role.

---

**Answer: D**

---

---

**Question: 4**

---

You need to design a solution for calling a server-side method of the code-behind file from JavaScript. Which

approach should you recommend?

- A. Use Page Methods.
- B. Use an Update Panel control.
- C. Use an Update Progress control.
- D. Configure the server-side method to return a JsonResult.

---

**Answer: A**

---

---

**Question: 5**

---

You need to design a solution for accessing the shopping cart controls by using JavaScript. Which configuration should you recommend?

- A. Use <% control.ID %>.
- B. Use <% control.ClientID %>.
- C. Use ClientIDMode="AutoID".
- D. Use ClientIDMode="Predictable".

---

**Answer: D**

---

---

**Question: 6**

---

You need to recommend a debugging strategy for JavaScript code on the shopping cart page. Which approach should you recommend?

- A. use of the Microsoft Script Debugger
- B. use of the Internet Explorer Developer Tools
- C. attaching a debugger to the Internet Explorer process
- D. attaching a debugger to the Web development server process

---

**Answer: C**

---

---

**Question: 7**

---

You need to design a solution that supports the end user display requirements for data and graphics. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Use a language-specific master page
- B. Replicate each page once for each supported language
- C. Create a local resource file for each page and for each language.
- D. Populate the database with data in each language, and retrieve the data in the user's language.

---

**Answer: C, D**

---

---

**Question: 8**

---

You need to design an exception-handling strategy for the Web application. Which approach should you recommend?

- A. Add a customErrors section in the configuration file, with mode="On" and default Redirect="/error.aspx".
- B. Add a customErrors section in the configuration file, with mode="RemoteOnly" and defaultRedirect="/error.aspx".
- C. Catch all unhandled exceptions in the Page\_Error event of each page, send an e-mail message containing the exception details, clear all errors, and redirect the user to a generic error page.
- D. Catch all unhandled exceptions in the Application\_Error event of the Global.asax file, send an e-mail message containing the exception details, clear all errors, and redirect the user to a generic error page.

---

**Answer: D**

---

---

**Question: 9**

---

You need to design a solution for storing sessions in the application. Which approach should you recommend?

- A. Use inProc mode
- B. Use SQL Server mode
- C. Use State Server mode
- D. Use a custom mode with session data saved in the cache

---

**Answer: B**

---

---

**Question: 10**

---

You need to design a solution for implementing holiday-specific site changes. Which approach should you recommend?

- A. Create a single master page, and change its images and styles dynamically in the code-behind file
- B. Create one master page for each holiday. In each master page, reference the styles and images for the specific holiday.
- C. For each holiday, create a theme that contains the related images and styles. Include a skin file, and reference the images within the master page with a SkinID.
- D. For each holiday, create a theme that contains the related images and styles. Include a skin file, and reference all images within the Web application with a SkinID.

---

**Answer: D**

---

---

**Question: 11**

---

You need to incorporate a data access layer to meet the requirements. Which solution should you recommend?

- A. an Entity Data Model created by using the Entity Framework within the Web project
- B. a class that is stored in the app\_code folder of the Web project. uses ADO.NET, and returns DataSets
- C. a separate data access project that includes an Entity Data Model created by using the Entity Framework
- D. a separate data access project that queries the database by using ADONET and returns DataSets

---

**Answer: C**

---

**Case Study: 3**

**Case Study Name: CSHARP Blue Yonder Airlines**

**Tab ID: 1****Tab ID Name: BACKGROUND****Tab ID Text:**

You are a senior developer at Blue Yonder Airlines.

The company has an existing Web application that was written by using Classic ASP and COM+. It has become increasingly difficult to maintain the non- object oriented code. Ongoing growth has made the current security implementation unreliable in the defense of the attack surface. An increased user base has introduced scalability and performance problems.

After several project planning sessions, the architecture team has decided that the Web application must be rewritten to increase security, allow better scalability, improve maintainability of source code, and implement best practices.

**Tab ID: 2****Tab ID Name: Security****Tab ID Text:**

Your solution must meet the following business requirements.

All users of the Web application must have a user name, a password, and one or more roles assigned. You must support dynamic updates to roles and permissions from within the Web application. Specific areas of the Web application must be secured to prevent access by unauthorized users. Due to security concerns, the use of persistent cookies is not allowed. However, the use of session cookies is allowed.

**Tab ID: 3****Tab ID Name: Data Access****Tab ID Text:**

The Web application must use a Microsoft SQL Server 2008 data store. In addition, the Web application must provide the capability to connect to and display third-party data.

The database will store a list of news items and news categories that have the following associated requirements:

- The Web application must allow users to specify a news category for entry or retrieval of news items.
- When the user begins entering a news category name, the Web application must display categories matching the entered text without submitting a form.
- News items that are posted in the Web application must be exposed to visitors by using RSS feeds.
- The news feeds must be retrieved from the database and formatted by using the Rss20FeedFormatter class.

**Tab ID: 4****Tab Name: Exception Management****Tab ID Text:**

All exceptions within the Web application must be logged. All application exceptions must be handled at the controller level. If an exception occurs, the Web application must display a user-friendly error message.

**Tab ID: 5****Tab Name: TECHNICAL REQUIREMENTS****Tab ID Text:**

Your solution must meet the following technical requirements.

**Tab ID: 6****Tab Name: Development Environment****Tab ID Text:**

The Web application must be rewritten by using Microsoft Visual Studio 2010 and ASP.NET 4.

**Tab ID: 7****Tab Name: Deployment****Tab ID Text:**

The Web application will be deployed to a Web farm that contains three round-robin load-balanced Web servers. An

ASP.NET 1.1 Web application currently resides within the same Web farm. You must deploy the Web application by using a single package that will copy the Web application files, modify the registry, add a new application to IIS, and execute SQL scripts. After your Web application is deployed, the ASP.NET 1.1 Web application must continue to operate as usual.

**Tab ID: 8**

**Tab Name: Project Configuration**

**Tab ID Text:**

The web application must be developed by using ASP.NET MVC 2 and the built-in webFormsviewEngine view engine. The Web application must have the capability to store debug and release configuration information separately.

**Tab ID: 9**

**Tab Name: Data Access**

**Tab ID Text:**

The Web application must connect to data sources by using object-relational mapping (ORM). The built-in classes must be used to manage users, personal preferences, and permissions.

**Tab ID: 10**

**Tab Name: Reusability**

**Tab ID Text:**

To improve code maintainability, any user-interface code that can be reused in multiple locations of the Web application must be encapsulated in a single control, plug-in, or class.

---

### Question: 1

---

You need to design a solution for capturing an exception. Which approach should you recommend?

- A. Use a Page\_Error method.
- B. Use a HandleError attribute.
- C. Use a customErrors element.
- D. Use an Application\_Error method.

---

**Answer: B**

---

---

### Question: 2

---

You need to design a solution to ensure that data caching and session state will be maintained. Which approach should you recommend?

- A. Use distributed caching and out-of-process session state.
- B. Use distributed caching and in-process session state.
- C. Use output caching and out-of-process session state.
- D. Use output caching and in-process session state.

---

**Answer: A**

---

---

### Question: 3

---

You need to design a solution for programmatically adding reusable user-interface code to views and allowing the user-interface code to be rendered from the server side. Which approach should you recommend?

- A. Create a jQuery library plug-in.
- B. Create an HtmlHelper extension method.
- C. Create a controller that returns an Action Result.
- D. Create a Web Form server control that stores values in ViewState.

---

**Answer: B**

---

---

**Question: 4**

---

You need to recommend appropriate technologies for designing Web forms for entry and retrieval of news items. Which technologies should you recommend? (Each correct answer presents a complete solution. Choose two.)

- A. ASMX and SOAP
- B. WCF Data Services and jQuery
- C. ASP.NET MVC 2 and Microsoft AJAX
- D. Entity Framework and Microsoft Silverlight

---

**Answer: B, C**

---

---

**Question: 5**

---

You need to design the application to support the news feature. Which approach should you recommend?

- A. Use the FileResult class and return the result as a plain text file.
- B. Use the ViewResult class and bind the items to an HTML.TextArea HTML Helper.
- C. Use a custom ActionResult class and return the output stream as the return value.
- D. Use a custom ActionResult class and bind the items to an HTML.TextArea HTML Helper.

---

**Answer: C**

---

---

**Question: 6**

---

You need to design a deployment solution for the rewritten Web application. Which approach should you recommend?

- A. Use MSDeploy and FTP.
- B. Use DB Deployment and FTP.
- C. Use MSDeploy and One-Click Publishing.
- D. Use DB Deployment and One-Click Publishing.

---

**Answer: C**

---

---

**Question: 7**

---

You need to design an automation solution for the final-release build process. Which approach should you recommend?

- A. Use Web application configuration file transforms.

- B. Create a custom configuration section for each build configuration value.
- C. Append the Config Source attribute to each application configuration section.
- D. Duplicate each configuration section for the debug build configuration, and modify the settings for the release build configuration.

---

**Answer: A**

---

---

**Question: 8**

---

You need to plan for authentication and authorization of Web application users. Which approach should you recommend?

- A. Use the Membership API.
- B. Use the Personalization API.
- C. Use the Local Security Policy.
- D. Use the Group Policy Manager.

---

**Answer: A**

---

---

**Question: 9**

---

You need to design session state management for the rewritten Web application. Which approach should you recommend?

- A. Use a persistent cookie to store the authentication ticket.
- B. Use the same machine key element attributes and values across all three servers.
- C. Use a third-party cookie to store the authentication ticket.
- D. Use different machine key element attributes and values across all three servers.

---

**Answer: B**

---

---

**Question: 10**

---

You need to design a solution for ensuring that only users with the Administrators role have access to the Admin area of the Web application. Which approach should you recommend?

- A. Choose to include the LoginView control within each file in the Admin area.
- B. Ensure that each ActionResult returned to the Admin area contains the Authorize attribute and the appropriate properties.
- C. Allow only the local computer Administrator account to have NT permissions on the files contained in the Admin area.
- D. Establish an authorization section in each location section in the Web application configuration files for each area that needs to be secured.

---

**Answer: B**

---

---

**Question: 11**

---

You need to design a deployment solution for the rewritten Web application. Which approach should you

recommend?

- A. Add the rewritten Web application to an application pool that contains only ASP.NET 4 Web applications.
- B. Add the rewritten Web application to the same application pool as Web applications written in ASP.NET 2.0, ASP.NET 3.0, and ASP.NET 3.5.
- C. Compile the rewritten Web application and deploy the compiled library to the global assembly cache.
- D. Deploy the rewritten Web application to the existing file path on each server in the Web farm.

---

**Answer: A**

---

#### Case Study: 4

Case Study Name: **70-519VB**

Case Study Text:

**70-519VB Mix QUESTIONS IN THIS CASE STUDY**

---

#### Question: 1

---

You are designing a testing methodology for an ASP.NET MVC 2 Web application. The application has a simple domain model that provides a thin wrapper over a data access layer. Controllers interact with the domain model directly and use methods on repository objects to save and retrieve objects from the data access layer. You have the following requirements:

- Centralize data operations.
- Directly validate data access rules.

You need to design tests against the appropriate layer to meet the requirements. Which layer should you recommend?

- A. the controllers
- B. the domain model
- C. the data access layer
- D. the repository objects

---

**Answer: D**

---

---

#### Question: 2

---

You are designing a testing methodology for an ASP.NET MVC 2 Web application. You have the following application testing requirements:

- Verify that security issues are identified as early within the request as possible.
- Verify that the effectiveness of input corruption is minimized.

You need to meet the application testing requirements. Which methodology should you recommend?

- A. Design tests against the model.
- B. Design tests against the controllers.
- C. Design tests against the client browser.
- D. Design tests against the data access layer.

---

**Answer: B**

---



---

**Question: 3**

---

You have an ASP.NET Web application that displays charts that are generated daily from data in a Microsoft SQL Server database. Each chart is implemented as a user control that displays data retrieved from the database. Data retrieval and chart generation consume a significant amount of resources. Users of the Web application generate unique reports that contain one or more chart controls. Each chart is common to many reports. You need design a solution to improve the performance of the Web server. Which approach should you recommend?

- A. Use page caching.
- B. Use fragment caching.
- C. Use the application cache.
- D. Use SQL cache dependency.

---

**Answer: B**

---

---

**Question: 4**

---

You are designing a plan to scale an ASP.NET Web application to support up to 20,000 concurrent users. Application usage statistics indicate that many queries against the database retrieve data that does not change frequently. You need to reduce database round trips for static data. Which approach should you recommend?

- A. Use session state.
- B. Use the application cache.
- C. Use SQL Server replication.
- D. Use multiple active result sets.

---

**Answer: B**

---

---

**Question: 5**

---

You are implementing additional functionality within an existing ASP.NET 4 Web Forms Web site project by using ASP.NET MVC2. You need to design a Web site project configuration that supports Web Forms and ASP. NET MVC 2 in the same Microsoft Visual Studio 2010 project. Which two approaches should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Convert the Web site project to a Web application.
- B. Convert the Web site project to an ASP. NET MVC 2 application.
- C. Modify the T4 templates to support ASP.NET Web Forms.
- D. Reference the ASP.NET MVC 2 assemblies in the application configuration file.

---

**Answer: A, D**

---

---

**Question: 6**

---

You are designing a monitoring plan for a multi-tier ASP.NET Web application. The Web application uses multiple Web servers and a database server. You plan to use a dedicated monitoring server. You need to send an alert when any application server stops responding. Which approach should you recommend?

- A. Run a process on the monitoring server that periodically sends a request to each application service. Send an alert if a response is not received for any request.
- B. Run a process on each Web server that logs activity to a database on the monitoring server. Run a process on the monitoring server that periodically checks the monitoring database and sends an alert if any service stops logging.
- C. Use AJAX to log user actions on each Web page to a database on the monitoring server. Run a process on the monitoring server that periodically checks the monitoring database and sends an alert if there is an interruption in Web page activity.
- D. Use Microsoft Message Queuing (MSMQ) to send a message to the monitoring server in the Load event of the Web application's master page. Run a process on the monitoring server that polls for MSMQ messages and sends an alert if any server stops sending messages.

---

**Answer: A**

---

---

**Question: 7**

---

You are designing an ASP.NET Web application that will queue e-mail messages in a database. A Windows service will process the queue and send the messages. The Web application will be hosted on a server that hosts several other applications. The server cannot support additional processors or memory. You estimate that the Web application usage will increase by 10 percent every month. You need to ensure that the delivery of high-priority messages will not be delayed as the Web application usage increases. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Process the high-priority messages first.
- B. Use a shared memory connection to the database.
- C. Modify the Windows service to handle multiple threads.
- D. Run the Windows service on a server that is separate from the Web application host server.

---

**Answer: A, D**

---

---

**Question: 8**

---

You are designing a process for deploying an ASP.NET MVC 2 Web application to IIS 6.0. You need to ensure that the Web application properly handles Web requests. Which approach should you recommend?

- A. Configure IIS to map all requests to aspnet\_isapi.dll by using a wildcard script map.
- B. Configure IIS to map all requests to aspnet\_wp.exe by using a wildcard script map.
- C. Modify the Web application to route all requests to an HttpHandler class.
- D. Modify the Web application to route all requests to an HttpModule class.

---

**Answer: A**

---

---

**Question: 9**

---

You are designing an ASP.NET Web application for content management. You have the following requirements:

- Support multiple languages.
- Support dynamic changes to site content.
- Provide the ability to add content to the site without making changes to files within the application directory.

You need to recommend the application's source for retrieving content. Which source should you recommend?

- A. a database based on CurrentUICulture
- B. a master page based on CurrentUICulture
- C. local resources based on CurrentCulture
- D. global resources based on CurrentCulture

---

**Answer: A**

---



---

**Question: 10**

---

You are designing an ASP.NET Web application for display on desktop computers and on mobile devices. You have the following requirements:

- Present a full-featured interface to users of desktop computers that include many interaction options and graphical buttons.
- Present a simple interface to users of mobile devices that do not include bandwidth-intensive elements.

You need to design the Web application to meet the requirements. Which two approaches should you recommend? (Each correct answer presents part of the solution? Choose two.)

- A. Create two separate skins for desktop and mobile user interfaces
- B. Create two separate themes for desktop and mobile user interfaces
- C. In the PreRender method of the Web application's master page, test Request.Browser.MobileDeviceModel and switch to the appropriate interface.
- D. Create a System.Web.UI.Page subclass that all Web application pages inherit from. In the Page\_PreInit method, test Request.Browser.IsMobileDevice and switch to the appropriate interface

---

**Answer: B, D**

---



---

**Question: 11**

---

You are designing an ASP.NET Web Forms application. You have the following requirements:

- Make use of exclusive features in a newly released Web browser.
- Do not change existing code files.

You need to design the application to meet the requirements. Which approach should you recommend?

- A. Use a .browser file.
- B. Use the HttpWorkerRequest class.
- C. Use the Web application's master page.
- D. Parse the User Agent string in Page\_Load.

---

**Answer: A**

---



---

**Question: 12**

---

You are designing the user interface for an ASP.NET Web application. The Web application allows several departments to personalize the style of their sections of the Web application. All departmental section styles derive from the core styles of the Web application and can only append to the Web application's core styles. The departmental master pages inherit from the Web application's master page. You need to ensure that core CSS styles appear on all pages of the Web application. Which approach should you recommend?

- A. Add a master.css file containing the CSS styles to the Web application.
- B. Add a Content Place Holder containing the CSS styles to the Web application's master page
- C. Link from the Web application's master page to a .css file containing the CSS styles.
- D. Link from the Web application's master page to a css.ascx file containing the CSS styles.

---

**Answer: C**

---

---

**Question: 13**

---

You are designing an ASP.NET Web application for content management. You have the following requirements:

- Support multiple browsers.
- Display a specific interface for browsers that have display dimensions of less than 640 x 480 pixels.

You need to design a solution for identifying the display dimensions of the requesting browser. Which approach should you recommend?

- A. Use CurrentUICulture.
- B. Use the HttpUtility class.
- C. Use the HttpRequest class.
- D. Use the HttpBrowserCapabilities class.

---

**Answer: D**

---

---

**Question: 14**

---

You are designing a RESTful ASP.NET Web application. You have the following requirements:

- Retain state between requests.
- Associate a request with a session.
- Do not require the use of cookies.

You need to ensure that your design meets the requirements. Which approach should you recommend?

- A. Disable View State by using the @ Page directive
- B. Configure the application to use cookieless session state
- C. Configure the application to use the InProc session state mode
- D. Register a custom Page Adapter class that provides a Session State Page Persister.

---

**Answer: B**

---

---

**Question: 15**

---

You are designing an ASP.NET Web application to manage and display sensitive information stored in a Microsoft SQL Server database. The database also provides authorization information for users. All Web pages that display sensitive information require an authenticated login. There is no visitor access to these pages.

You have the following requirements:

- Separate authorization logic from the application.
- Prevent the application from directly accessing the database server.

You need to design a data access and authorization solution. Which approach should you recommend?

- A. Use a WCF service.
- B. Use a separate library.

- C. Use SQL XML Services.
- D. Use stored procedures.

---

**Answer: A**

---

---

**Question: 16**

---

You are designing an ASP.NET Web application. You have the following requirements:

- The application must be usable in partially connected scenarios.
- Data that is entered into the application offline must be synchronized with the server the next time the application is online.

You need to design the application to meet the requirements. What should you use?

- A. jQuery
- B. ASP.NET AJAX
- C. WCF Data Services
- D. Microsoft Silverlight

---

**Answer: D**

---

---

**Question: 17**

---

You are designing an ASP.NET Web application for online image editing. Users can upload images to the Web application and edit those images by using utilities provided by the application. Some utilities are processor intensive and should be offloaded to a Graphics Processing Unit (GPU). Other utilities require the use of proprietary algorithms that must be performed on the server. You need to design a solution for minimizing bandwidth usage and Web server response times during image processing, while providing a responsive application. Which two approaches should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Perform server-side image processing on the Web server
- B. Perform server-side image processing on a dedicated server.
- C. Perform client-side image processing by using ASP.NET AJAX.
- D. Perform client-side image processing by using Microsoft Silverlight.

---

**Answer: B, D**

---

---

**Question: 18**

---

You are designing an ASP.NET Web application. The Web application uses a Menu control to display either a menu of public and private pages to authorized users or a menu of only public pages to visitors. You need to ensure that the menu options and URLs of the private pages are not available to unauthorized users. Which approach should you recommend?

- A. Use the Page\_Init method to add to the Menu control only pages that the user is authorized to view
- B. Use the Page\_Load method to add to the Menu control only pages that the user is authorized to view
- C. Use a JavaScript window.onload event handler to hide the private pages from the list of pages shown on the menu
- D. Use a JavaScript document ready event handler to hide the private pages from the list of pages shown on the menu

---

**Answer: B**

---

---

**Question: 19**

---

You are designing an ASP.NET Web application. You have the following requirements:

- Perform rapid development.
- Maintain cross-browser compatibility.
- Do not require client-side installations.

You need to recommend a client-side technology that meets the requirements. Which two technologies could you recommend? (Each correct answer presents a complete solution. Choose two.)

- A. jQuery
- B. ASP.NET AJAX
- C. Microsoft Silverlight
- D. Microsoft Visual Basic Scripting Edition (VBScript)

---

**Answer: A, B**

---

---

**Question: 20**

---

You are designing an ASP.NET Web Forms application. You expect the application to have high traffic. You plan to use a Web farm to balance the application load across several Web servers. You have the following requirements:

- Use round-robin load balancing.
- Do not use persistent storage for session data.

You need to ensure that your design meets the requirements. Which configuration should you recommend?

- A. Use cookieless session state.
- B. Use the InProc session state mode.
- C. Use the SQLServer session state mode.
- D. Use the StateServer session state mode.

---

**Answer: D**

---

---

**Question: 21**

---

You are designing an ASP.NET MVC 2 Web application. You have the following requirements:

- Type safety must be validated at compile time.
- Code must not require explicit run-time type casting.

You need to pass data between the controllers and the views within the Web application. Which approach should you recommend?

- A. Use the ViewDataDictionary class.
- B. Use the TempDataDictionary class.
- C. Use strongly typed view model classes.
- D. Use dynamic object view model classes.

---

**Answer: C**

---

---

**Question: 22**

---

You are designing an ASP.NET Web application. You have the following requirements:

- Users must be allowed to save their work in progress on one computer and to continue the work on another computer.
- Data that is submitted for processing must be valid, and invalid data must be rejected.
- Primary key constraints within the database must be enabled at all times
- The application must store only data that is entered by the user

You need to design data validation to support the requirements. Which two approaches should you recommend (Each correct answer presents part of the solution. Choose two.)

- A. Store temporary form data as XML in a database table.
- B. Use validators to verify the data when the user submits a form.
- C. Add an is Temporary column to each database table, and set all columns to allow null values
- D. Provide default values for the database columns, and submit the form with user-entered values when the user saves the form.

---

**Answer: A, B**

---



---

**Question: 23**

---

You are designing an ASP.NET Web application that allows users to type a value in a text box The application must function with JavaScript disabled. You need to design a method for using a Web service to validate the user-typed value before the form is processed. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Use a CustomValidator control.
- B. Use a DynamicValidator control.
- C. Use an OnServerValidate method.
- D. Use a ClientValidationFunction method.

---

**Answer: A, C**

---



---

**Question: 24**

---

You are designing an internal Web application. You have the following requirements:

- Use an existing data layer built on the Entity Framework
- Ensure that additional Entity Framework entities can be supported without additional coding.

You need to design the Web application so that users can add, edit, and delete data. Which approach should you recommend?

- A. Create an ASPNET Dynamic Data project.
- B. Create an ASP.NET MVC 2 project and use the Entity Framework data layer as your model.
- C. Create an ASP.NET Web Forms application and set the Data Source Id for each Grid View to an Entity Data Source control.
- D. Create an ASP.NET Web Forms application and set the Data Source Id for each Grid View to an Object Data Source control.

---

**Answer: A**

---



---

**Question: 25**

---

You have an ASP.NET Web Forms application for processing orders. Many users of the application submit their order forms multiple times due to incorrectly formatted credit card information. You need to plan for validation of the length and format of data in the credit card field on the client side prior to processing each transaction. Which approach should you recommend?

- A. Use a CustomValidator control in the Page\_Load method.
- B. Use a CustomValidator control in the OnServerValidate method.
- C. Use a RequiredFieldValidator control and a CompareValidator control.
- D. Use a RequiredFieldValidator control and a RegularExpressionValidator control.

---

**Answer: D**

---

---

**Question: 26**

---

You are designing an ASP.NET Web application. The application must provide a data access method that supports HTTP, MTOM, SOAP, and TCP. You need to ensure that customers can integrate their applications with the data sources and business rules for your Web application. Which data access technology or technologies should you recommend?

- A. Entity Framework
- B. Windows Communication Foundation
- C. ADO.NET DataSets and ASP.NET Web Services
- D. ADO NET DataTables and ASPNET Web Services

---

**Answer: B**

---

---

**Question: 27**

---

You are designing an ASP.NET 4 Web application that will integrate third-party components. You need to minimize the security risks of using these components. Which approach should you recommend?

- A. Apply role-based security with declarative checks.
- B. Store the components in the global assembly cache.
- C. Use the third-party components on a separate server.
- D. Use an appropriately permitted AppDomain for each component.

---

**Answer: D**

---

---

**Question: 28**

---

You are designing an ASP.NET Web application. You are implementing the ASP.NET membership and profile providers to do the following:

- Support retrieval of user passwords within the ASP.NET Web application
- Access profile data that is stored in two or more Microsoft SQL Server tables

You need to ensure that the Web application is properly configured to interact with the providers. Which approach should you recommend?

- A. Use encrypted passwords, and develop a custom profile provider.
- B. Use encrypted passwords and the built-in SqlProfileProvider.



- C. Use hashed passwords, and develop a custom profile provider.
- D. Use hashed passwords and the built-in SqlProfileProvider.

---

**Answer: A**

---

---

**Question: 29**

---

You are designing an ASP.NET Web Forms application that uses a database containing user names and hashed passwords for authentication. The Web application includes a login form in which users type their user names and passwords. You need to design a strategy to ensure that the user's login credentials cannot be stolen through a man-in-the-middle attack. Which approach should you recommend?

- A. Install a certificate on the Web server, and force the login form to use SSL.
- B. Write an on Submit JavaScript handler that hashes the password before the password is submitted to the server.
- C. Write an On Click method for the Submit button that hashes the password before the password is compared with the password value that is stored in the database.
- D. Write an on Submit JavaScript handler that URL-encodes the password before the password is passed to the server.

---

**Answer: A**

---

---

**Question: 30**

---

You are designing a user input form that is part of an ASP.NET Web Forms application. You need to ensure that users cannot attack the Web server by submitting invalid data. Which approach should you recommend?

- A. Install a certificate on the Web server, and force all Web traffic to use SSL.
- B. Write an onSubmit JavaScript handler that validates all form input
- C. Write an onSubmit JavaScript handler that URL-encodes all data that is passed to the server.
- D. Write an OnClick method for the Submit button that rejects form submissions that contain invalid data

---

**Answer: D**

---

---

**Question: 31**

---

You are designing an ASP.NET MVC 2 Web application for a customer's extranet site. You need to allow only requests that originate from the customers intranet IP address range to access the application, and you must redirect other access requests to the customers Web site. Which approach should you recommend?

- A. Configure the IIS Request Filter module to filter requests.
- B. Configure IIS to reject requests from outside the specified IP address range.
- C. Configure the IIS URL Rewrite module to redirect requests from outside the specified IP address range to the public Web site.
- D. Design the default controller and action to check the IP address and to redirect requests from outside the specified IP address range to the public Web site.

---

**Answer: C**

---

---

**Question: 32**

---

You are planning to migrate an ASP.NET 3.5 Web application to ASP.NET 4. The following elements must be optimized for search engines

“URLs within the Web application

“HTML rendered by the Web application

You need to design a solution for loading data dynamically into a Data List by using the current URL which approach should you recommend?

- A. Use Web Forms routing and set the Repeat Layout Property to Table on all list controls
- B. Use Web Forms routing and set the Render Outer table property to false on all Form View controls
- C. Use permanent redirect and set the Repeat Layout property to Table on all list controls
- D. Use permanent redirect and set the Render Outer table property to false on all Form View controls

---

**Answer: B**

---

---

**Question: 33**

---

You are designing an ASP.NET MVC 2 application. You need to centralize the logic for handling and logging unhandled exceptions. Which approach should you recommend?

- A. Use try and catch on every method.
- B. Override the One Exception method of each controller.
- C. Decorate all controllers with a custom Handle Error attribute
- D. Decorate all controllers with the default Handle Error attribute,

---

**Answer: C**

---

---

**Question: 34**

---

You are designing an ASP.NET Web application that contains both publicly accessible pages and administrative pages. You need to handle errors differently for publicly accessible pages and administrative pages, and you must use common code for each type of page. Which approach should you recommend?

- A. Use the Application\_Error method in the Global.asax.cs file.
- B. Use subclasses of System.Web.UI.Page with Page\_Error methods.
- C. Use the Page\_Error method in each of the master pages.
- D. Use the Page\_Error method in each of the publicly accessible pages and administrative pages.

---

**Answer: B**

---

---

**Question: 35**

---

You are designing a class library that will be used by all of your company's ASP.NET Web applications. A specific variable in a helper class within the library holds very sensitive information. You need to ensure that the variable is not visible to developers when they are debugging any of the Web applications. Which two actions should you recommend (Each correct answer presents part of the solution. Choose two.)

- A. Make the variable private
- B. Make the variable protected
- C. Use the Debugger Display attribute

D. Use the DebuggerBrowsable attribute

---

**Answer: A, D**

---

---

**Question: 36**

---

You are designing an ASP.NET Web Forms application. The application supports thousands of concurrent users. A Web form in the application enables users to send personalized e-mail messages to thousands of recipients. You need to design the application to optimize performance. Which approach should you recommend?

- A. Use a separate process from the OnClick method of the form.
- B. Use a BackgroundWorker class from the OnClick method of the form.
- C. Use the classes in the System.Web.Mail namespace from the OnClick method of the form.
- D. Use the classes in the System.Net.Mail namespace from the OnClick method of the form.

---

**Answer: A**

---

---

**Question: 37**

---

You need to design a deployment solution for the rewritten Web application. Which approach should you recommend?

- A. Deploy the rewritten Web application to the same file path on each server in the Web farm.
- B. Compile the rewritten Web application and deploy the compiled library to the global assembly cache.
- C. Add the rewritten Web application to an application pool that contains only ASP.NET Web applications.
- D. Add the rewritten Web application to the same application pool as Web applications written in ASP.NET 2.0, ASP.NET 3.0, and ASP.NET 3.5.

---

**Answer: C**

---

---

**Question: 38**

---

You are designing a solution for sharing information among employees located in a main office and several branch offices. The solution will consist of the following elements:

“An ASP.NET Web application that accesses and manipulates large amounts of data

‘Web services used by the Web application for data access

“A Microsoft SQL Server database

Data displayed to users is never more than one day old.

You need to plan a deployment strategy that minimizes bandwidth requirements.

Which deployment strategy should you recommend?

- A. Deploy the Web application, Web services, and database to the main office, and use browser caching.
- B. Deploy the Web application, Web services, and database to each branch office, and use SQL Server Replication.
- C. Deploy the Web services and database to the main office, deploy the Web application to each branch office, and use output caching.
- D. Deploy the database to the main office. Deploy the Web application and Web services to each branch office, and use caching at the Web service level.

---

**Answer: D**

---

---

**Question: 39**

---

You are designing an ASP.NET MVC 2 Web application. The view content will be composed of user controls. You have the following requirements:

- Deliver content that is provided by user controls to the browser.
- Select the appropriate user controls to render within the controller.

You need to ensure that your design meets the requirements. Which approach should you recommend?

- A. Use the Html. Render Partial extension method.
- B. Use the Html. Render Action extension method.
- C. Use the Partial View Result class.
- D. Use the Content Result class.

---

**Answer: B**

---

---

**Question: 40**

---

You are designing an ASP.NET Web Forms application. The Web application has a heavy reliance on view state. You are designing the Web application for use in regions that have limited or low-bandwidth connectivity. You have the following requirements:

- Decrease bandwidth requirements.
- Prevent any user from obtaining any part of the view state.
- Do not require changes to existing pages, user controls, or code-behind files that rely on the view state.

You need to ensure that the Web application meets these requirements. Which approach should you recommend?

- A. Configure IIS to use SSL.
- B. Configure IIS to use HTTP compression.
- C. Register a custom Page Adapter class that stores the view state in a cookie.
- D. Register a custom Page Adapter class that provides a Session State Page Per sister.

---

**Answer: D**

---

---

**Question: 41**

---

You need to design session state management for the rewritten Web application. Which approach should you recommend?

- A. Use a persistent cookie to store the authentication ticket.
- B. Use a third-party cookie to store the authentication ticket.
- C. Use different machine key element attributes and values across all three servers.
- D. Use the same machine key element attributes and values across all three servers.

---

**Answer: D**

---

---

**Question: 42**

---

During application testing, developers notice that the Temp Data property contents no longer persist between requests. You need to advise the developers of the requirements for ensuring that the Temp Data property contents

persist between requests. Which should you advise?

- A. View State must be enabled at the page level.
- B. View State must be enabled in the Web application configuration.
- C. Session State must be enabled in the Web application configuration.
- D. In Proc session state must be enabled in the Web application.

---

**Answer: C**

---

---

**Question: 43**

---

You have a Web application that has been migrated from ASP.NET 3.5 to ASP.NET 4. While testing the migrated Web application, developers notice that the non-input Web controls with the property Enabled="false" are rendering as enabled. You need to ensure that the controls in the migrated Web application render correctly, and that other Web applications hosted on the same Web server are not affected by the solution. Which approach should you recommend?

- A. Use the controls element of the pages section of the machine config file.
- B. Use the controls element of the pages section of the migrated application's web.config file.
- C. Use the control Rendering Compatibility Version element of the pages section of the machine config file.
- D. Use the control Rendering Compatibility Version element of the pages section of the migrated application's web.config file

---

**Answer: D**

---

---

**Question: 44**

---

You are designing an ASP.NET Web application. The Web application includes a section for sales pages. You need to ensure that the sales pages share a specific header and a specific footer that differ from those of all other pages in the application. Which approach should you recommend?

- A. Create the specific header and footer elements in the site's master page.
- B. Create separate user controls for the specific header and footer, and add each of the user controls to the site's master page.
- C. Create a sales subdirectory. Add a master.aspx page that contains the header and footer to the subdirectory, and then store all the sales pages in the subdirectory.
- D. Create a sales.master page that contains the header and footer and inherits from your site's master page, and then use the master page in each sales page.

---

**Answer: D**

---

---

**Question: 45**

---

You are designing an ASP.NET Web application by using Microsoft Visual Studio 2010. The Web application uses dynamic HTML (DHTML). You need to ensure that the application functions properly on multiple browser platforms without requiring the installation of a client-side component. Which two approaches could you recommend? (Each correct answer presents a complete solution. Choose two.)

- A. Use jQuery.

- B. Use Microsoft Silverlight.
- C. Use the ASP.NET Ajax Library.
- D. Use Microsoft Visual Basic Scripting Edition (VBScript).

---

**Answer: A, C**

---

---

**Question: 46**

---

You are designing an ASP.NET Web application. You need to ensure that users can display the content of the application in a language that they select. Which two approaches should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Use CurrentCulture.
- B. Use CurrentUICulture.
- C. Use language-specific master pages.
- D. Use language-specific resource files.

---

**Answer: B, D**

---

---

**Question: 47**

---

You need to design a solution that supports the end user display requirements for dates, numbers, and prices. Which two approaches should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Use CurrentCulture.
- B. Use CurrentUICulture.
- C. Display all dates, numbers, and prices by using the `String.Format()` property of the controls.
- D. Display all dates, numbers, and prices by using the `ToString(format)` method of the reference and value types.

---

**Answer: A, C**

---

---

**Question: 48**

---

You are designing a data access service backed by Microsoft SQL Server. Other developers will use your service as a third-party service. You have the following requirements:

- To reduce maintenance cost, you must write the minimal amount of code required for fulfilling the goals.
- The service must function with Microsoft and non-Microsoft technologies.
- The service must implement the WS-Security standards.

You need to design the service to meet the requirements. Which approach should you recommend?

- A. Use an ASP.NET Web service
- B. Use SQL Server XML Web services
- C. Use a WCF service with multiple bindings
- D. Use an .ashx file to return an XML response over HTTPS

---

**Answer: C**

---

---

**Question: 49**

---

You are designing an ASP.NET Web application that will be developed by using Microsoft Visual Studio 2010. The application will interact with a Microsoft SQL Server database. The data access layer of the application must meet the following requirements:

- Support rapid application development techniques.
- Allow the underlying database schema to change without affecting the object model.
- Contain strongly typed data objects.

You need to develop the data access layer. Which data access technology should you recommend?

- A. Entity Framework
- B. WCF Data Services
- C. ADO.NET DataSet
- D. ADONET DataTables

---

**Answer: A**

---

---

**Question: 50**

---

You are adding functionality to an ASP.NET MVC 2 Web application. You have the following requirements when passing form data to the server:

- Provide a simple way to map posted form values to a custom class object.
- Control the deserialization of custom class objects that are passed to the server.

You need to design the application to meet the requirements. Which approach should you recommend?

- A. Implement model binding.
- B. Use ASP.NET Dynamic Data.
- C. Implement AJAX data templates.
- D. Use a built-in HtmlHelper extension method.

---

**Answer: A**

---

---

**Question: 51**

---

You have an existing ASP.NET Web Forms application. All the Create, Read, Update, and Delete (CRUD) operations are implemented by using Windows Communication Foundation (WCF). The Web application has the following requirements:

- Minimize network traffic.
- Intrinsically support change tracking.
- Do not use post backs.

You need to design a Web form to manage inventory. Which approach should you recommend?

- A. Use server-side events, and encapsulate all controls in an Update Panel control.
- B. Use the ADO.NET Data Context class with the Data View control of the ASP.NET Ajax Library.
- C. Use HTML Controls and manipulate their content by using the API of the jQuery library.
- D. Use HTML Controls and manipulate their content by using the API of the ASP.NET Ajax Library.

---

**Answer: B**

---

---

**Question: 52**

---

You are designing an ASRNET Web application that allows users to specify a file to be uploaded by entering the URL of the file. Only files that contain information in a specific internal metadata field are allowed. You need to design a solution to reject URLs of disallowed files. Which two approaches could you recommend? (Each correct answer presents a complete solution. Choose two.)

- A. Use an On Click method.
- B. Use an on Submit Java Script handler.
- C. Use a Regular Expression Validator control.
- D. Use a custom validator control.

---

**Answer: A, D**

---

---

**Question: 53**

---

An ASP.NET Web application stores data in a Microsoft SQL Server database that runs on a separate server. The company requires all database access to be performed under the identity of the user that is connected to the application. The Web application uses integrated security in the database string. During testing, the Web application is unable to authenticate to the database as the connected user. You need to design an authentication strategy. Which approach should you recommend?

- A. Run the Web application under the System account.
- B. Run the Web application under the Network Service account.
- C. Configure the Web application for constrained delegation.
- D. Set the identity element of the Web application configuration to impersonate="true".

---

**Answer: C**

---

---

**Question: 54**

---

You need to design a solution for ensuring that only users with the Administrators role have access to the Admin area of the Web application. Which approach should you recommend?

- A. Allow only the local computer Administrator account to have NTFS permissions on the files contained in the Admin area.
- B. Choose to include the Login View control within each file in the Admin area.
- C. Establish an authorization section in each location section in the Web application configuration files for each area that needs to be secured.
- D. Ensure that each Action Result returned to the Admin area contains the Authorize attribute and the appropriate properties.

---

**Answer: D**

---

---

**Question: 55**

---

You are designing an ASP.NET Web application. Some Web application users prefer to turn off cookie support in their browsers. You need to secure the Web application against session spoofing when cookieless sessions are used. Which approach should you recommend?



- A. Use the Http Utility class.
- B. Use Session ID regeneration.
- C. Use SSL for the Web application.
- D. Use a custom Session id Manager class.

---

**Answer: D**

---

---

**Question: 56**

---

You are designing an ASP.NET Web application form that allows the user to submit queries to a Microsoft SQL Server database. You need to minimize the success of submitting corrupt client data to the form as a security attack against your Web application. Which two approaches should you recommend? (Each correct answer presents part of the solution? Choose two.)

- A. Use the Enable View State Mac property.
- B. Use SQL parameters for database access.
- C. Use an on Submit Java Script handler for the form
- D. Use Regular Expression Validator and Range Validator controls.

---

**Answer: B, D**

---

---

**Question: 57**

---

You are designing an ASP.NET Web application that displays daily sales information. The sales information is stored in a large Microsoft SQL Server database. The database information is updated each night. During the day, people use the Web application to display a set of standard sales reports based on the latest database information. The SQL queries that are required to retrieve and display the database information can take from 20 to 30 seconds to execute. You need to design the application to ensure that pages usually load in no more than 5 seconds. Which two approaches could you recommend? (Each correct answer presents a complete solution. Choose two.)

- A. Use SQL Server replication
- B. Use AJAX to retrieve the database information
- C. Use a control that retrieves and displays the database information
- D. Use a service that proxies the database queries and caches the results

---

**Answer: B, D**

---

---

**Question: 58**

---

You have an ASP.NET Web application. The Web application displays frequently changing data. As application usage increases, more queries are issued. And the database response time increases. You need to design a strategy for improving database query response time. Which approach should you recommend?

- A. Use the application cache
- B. Use SQL Server replication
- C. Use network load balancing
- D. Use multiple active result sets

---

**Answer: B**

---

---

**Question: 59**

---

You are designing the deployment process for a new ASP.NET Web application. You need to ensure that the application is protected from modification after deployment. Which approach should you recommend?

- A. Use MSDeploy.
- B. Use the Web Deployment tool.
- C. Use a Web Deployment project.
- D. Use the ASP.NET Compilation tool.

---

**Answer: D**

---

---

**Question: 60**

---

You are designing a deployment process for a new ASP. NET Web application. The company requires the application to be compiled to a single DLL for deployment. You need to design a deployment process that meets the requirement. Which approach should you recommend?

- A. Use MSDeploy.
- B. Use the Web Deployment tool.
- C. Use a Web Deployment project.
- D. Use the ASP.NET Compilation tool.

---

**Answer: C**

---

---

**Question: 61**

---

You are designing an ASP.NET Web application in Microsoft Visual Studio 2010. You plan to deploy the application to multiple branch offices within your company. Each branch office requires different settings for SQL Server connections. You need to centrally manage the automatic configuration for each branch deployment. Which two approaches could you recommend? (Each correct answer presents a complete solution. Choose two.)

- A. Use a separate web.config file for each branch office.
- B. Store the connection strings in the database.
- C. Use configuration transformations.
- D. Use MSDeploy.

---

**Answer: C, D**

---

---

**Question: 62**

---

You are planning a deployment process for a set of interrelated Web services. You need to ensure maximum availability of the Web services in the event of a hardware or software failure. Which approach should you recommend?

- A. Run each distinct service on a separate physical machine.
- B. Run each distinct service on two separate physical machines.
- C. Run each distinct service on a separate virtual machine (VM).

D. Run each distinct service on two virtual machines (VMs) hosted on one physical machine.

---

**Answer: B**

---

---

**Question: 63**

---

You have an ASP.NET Web application that is deployed on multiple, identical Web servers. The Web servers retrieve data from multiple, identical Microsoft SQL Server databases. Each user maintains an active Web application session during the entire business day. You notice that some Web servers consume 100 percent of their CPU resources and return timeout errors, while other Web servers are idle. You need to design a plan to load-balance the Web application across the available Web servers. Which approach should you recommend?

- A. Use affinity load balancing with SQLServer session state.
- B. Use affinity load balancing with StateServer session state.
- C. Use per-request load balancing with InProc session state.
- D. Use per-request load balancing with StateServer session state.

---

**Answer: D**

---

---

**Question: 64**

---

You are supporting an ASP.NET Web application. The Web application occasionally shuts down unexpectedly in the production environment. You cannot reproduce the problem in your local environment. You need to design a strategy to ensure that you can immediately diagnose the problem without affecting the performance of the production environment. Which approach should you recommend?

- A. Use ASP.NET tracing.
- B. Use ASP.NET health monitoring.
- C. Use local debugging against the hosting Web server process.
- D. Use remote debugging against the hosting Web server process.

---

**Answer: B**

---

---

**Question: 65**

---

You are designing a method for collecting information regarding usage of new functionality within an ASP.NET Web application. You have the following requirements:

- Usage data must be stored in a database for easy reporting.
- The application must not include code relating to usage data.

You need to design a strategy that meets the requirements. Which approach should you recommend?

- A. Use ASP.NET tracing
- B. Use remote debugging
- C. Use ASP.NET health monitoring
- D. Use the Request Started method

---

**Answer: C**

---

---

**Question: 66**

---

You are designing an ASP.NET Web application. A page of the Web application will allow users to post comments and view comments posted by other users. You need to recommend an approach for preventing the Web application from storing malicious content. What should you recommend?

- A. In the page code-behind, add a Validation attribute.
- B. On the page, set the ValidateRequest property of the @ Page directive to false. Use the HtmlEncode() method on submitted content before storing the content in the database.
- C. On the page, set the ValidateRequest property of the @ Page directive to false. Use the HtmlAttributeEncode() method on submitted content before storing the content in the database.
- D. In the page code-behind, add a ValidateInput attribute.

---

**Answer: C**

---

---

**Question: 67**

---

You are designing the deployment strategy for an ASP.NET Web application. You need to recommend an approach for displaying a maintenance notice to users while deploying a new version of the Web application. What should you recommend?

- A. Place a file named app\_offline.htm in the root of the Web application folder.
- B. In the Web.config file, under the system.web/httpRuntime element, set the enable attribute to false.
- C. In the Web.config file, under the system.web/httpModules element, add a clear element.
- D. Place a file named app\_offline.aspx in the root of the Web application folder.

---

**Answer: A**

---

---

**Question: 68**

---

An ASP.NET Web application is deployed on a single Web server. Web application state for client requests is stored in a Microsoft SQL Server 2008 database. The Web application must meet the following requirements:

- Tolerate a Web server failure.
- Scale gracefully to accommodate a rapid load increase.

You need to recommend an approach for accommodating a load increase. What should you recommend?

- A. Transfer the Web application to a load-balanced Web farm.
- B. Set up a Web garden for the deployed application on the existing Web server.
- C. Partition the data in tables across multiple servers.
- D. Upgrade the CPU, memory, and disk space of the existing Web server.

---

**Answer: A**

---

---

**Question: 69**

---

You are planning a deployment process for a set of interrelated Web services. You need to ensure maximum availability of the Web services in the event of a hardware or software failure. Which approach should you recommend?

- A. Run each distinct service on a separate physical machine.

- B. Run each distinct service on a separate virtual machine (VM).
- C. Run each distinct service on two separate physical machines.
- D. Run each distinct service on two virtual machines (VMs) hosted on one physical machine.

---

**Answer: C**

---

---

**Question: 70**

---

You are redesigning an existing three-tier ASP.NET Web application that is deployed to a Web server, an application server, and a database server that runs Microsoft SQL Server 2008. Usage has increased significantly. The application has become slow and occasionally times out. Health monitoring logs indicate that the data access logic on the application server is consuming the majority of the CPU resources. You need to recommend an approach for addressing the scalability and reliability issues. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Partition the tables and indexes in the database.
- B. Move the application tier to a Web farm.
- C. Move the Web tier to a Web farm.
- D. Use a clustered database server configuration.

---

**Answer: B, D**

---

---

**Question: 71**

---

You are evaluating an ASP.NET Web application that includes three methods:

- Calculate() performs CPU-intensive calculations on the server.
  - GetData() retrieves data from a server-side data store and returns an XML file.
  - WriteData() receives an XML file and writes data from the file to a server-side data store.
- You need to recommend an approach for maximizing server throughput. What should you recommend?

- A. Asynchronous processing for the GetData() and WriteData() methods.
- B. Asynchronous processing for the GetData() and Calculate() methods.
- C. Synchronous processing for the WriteData() and Calculate() methods.
- D. Synchronous processing for the GetData() and Write Data() methods.

---

**Answer: A**

---

---

**Question: 72**

---

You are designing an ASP.NET Web application that has common navigation and layout elements on all pages. You have the following requirements:

- Maintain common elements in a single location.
- Ensure that common elements can be modified and nested without redeploying the Web application.
- Allow developers to customize the object model from individual pages.

You need to recommend a solution that can be specified at the application, folder, or page level. What should you recommend?

- A. Use a master page.
- B. Use a theme.

- C. Use a page base type.
- D. Use a server control.

---

**Answer: A**

---

---

**Question: 73**

---

You are designing an ASP.NET MVC 2 Web application that will contain reusable markup. The Web application must read data from the TempData dictionary. You need to recommend a solution that allows the Web application to pass data between pages by using the TempData dictionary. What should you recommend?

- A. Design a view user control and enable ViewState.
- B. Use a Substitution control and enable Session state.
- C. Design a view user control and enable Session state.
- D. Use a Substitution control and enable ViewState.

---

**Answer: C**

---

---

**Question: 74**

---

You are designing an ASP.NET Web application that allows user input. You have the following requirements:

- Use client-side state management.
- Prevent users from accidentally modifying data.
- Automatically encode data.
- Preserve data during a page postback.

You need to recommend the appropriate type of state management. Which type should you recommend?

- A. Session state
- B. The query string
- C. A hidden field
- D. view state

---

**Answer: D**

---

---

**Question: 75**

---

You are designing an ASP.NET MVC 2 Web application. The Web application must meet the following requirements:

- Validate all user input for a class named Customer.
- Perform client-side and server-side validation.

You need to recommend an approach for validating user input. What should you recommend?

- A. Use ASP.NET validation server controls. Call the `Html.EnableClientValidation()` method.
- B. Add `DataAnnotations` attributes to each property in the Customer class. Associate all rendered elements with a validation group.
- C. Use only strongly typed HTML helpers. Call the `Html.ValidationMessageFor()` method for each property in the Customer class.
- D. Add `DataAnnotations` attributes to each property in the Customer class. Call the `Html.EnableClientValidation()` method.

---

**Answer: D**

---

---

**Question: 76**

---

You are designing an ASP.NET Web application. Each page of the Web application will have a common master page and derive from a common base page class. You have the following requirements:

- Support multiple languages for user interface labels.
- Enable automatic detection of language based on browser language settings.

You need to recommend an approach to support localization. What should you recommend?

- A. In the code-behind for the master page, override the OnInit() method. Set the Thread.CurrentThread.CurrentUICulture property based on the value of the Request.Browser.Capabilities("preferredLanguage") dictionary entry.
- B. In the code-behind for the base page, override the InitializeCulture() method. Set the Thread.CurrentThread.CurrentUICulture property based on the value of the ViewState("Accept-Language") dictionary entry.
- C. In the Web.config file, add a globalization element with the uiCulture attribute set to auto.
- D. In the Web.config file, add a globalization element with the responseEncoding attribute set to auto.

---

**Answer: C**

---

---

**Question: 77**

---

You are modifying an existing ASP.NET Web application. Each page of the Web application includes a navigation bar and a print button. You have the following requirements:

- Enable users to print pages of the Web site without printing the navigation bar.
- Do not create a separate version of the page formatted for printing.
- Leverage the existing print button on each page.

You need to recommend an approach that meets the requirements. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Add the PrintingPermission attribute to the code-behind page class.
- B. In the header, add a style sheet tag that sets the media attribute to print.
- C. Add an OnClick event handler to the print button to set the Response.ContentType property to style/print.
- D. Add an OnClientClick event handler to the print button to call the window.print() function.

---

**Answer: B, D**

---

---

**Question: 78**

---

You are designing an ASP.NET Web application. The Web application must meet the following requirements:

- Support REST without implementing custom URI templates.
- Allow CRUD functionality.

You need to recommend a data access strategy. What should you recommend?

- A. Use WCF Data Services.
- B. Use SQL Server Service Broker.
- C. Use ASP.NET Web Services.
- D. Use WCF Services.

---

**Answer: A**

---

---

**Question: 79**

---

You are designing an ASP.NET Web application. You have the following requirements:

- Relational database tables must automatically map to .NET classes.
- The data access layer must be able to target database engines other than Microsoft SQL Server.

You need to recommend a data access technology. Which technology should you recommend?

- A. direct ADO.NET calls
- B. LINQ to SQL
- C. .NET Framework Data Provider for OLE DB
- D. Entity Framework 4

---

**Answer: D**

---

---

**Question: 80**

---

You are designing a Windows Communication Foundation (WCF) service. The WCF service will support a common data access strategy for an ASP.NET 1.1 Web application and an ASP.NET 4 Web application. You have the following requirements:

- Ensure that the WCF service complies with WS-\* standards.
- Enable backward-compatibility for clients that can consume only ASMX Web Services.

You need to recommend an endpoint and binding strategy for the WCF service. What should you recommend?

- A. a single endpoint using NetMsmqBinding
- B. a single endpoint using NetTcpBinding
- C. multiple endpoints using NetTcpBinding and WSHttpBinding
- D. multiple endpoints using BasicHttpBinding and WSHttpBinding

---

**Answer: D**

---

---

**Question: 81**

---

You are designing an ASP.NET Web application that stores data in a Microsoft SQL Server 2008 database on a remote server. You must meet the following requirements:

- Ensure that users' actions can be traced on each server by using the security audit log.
- Minimize the risk of server components executing in the user's context.

You need to recommend an approach for accessing the database. What should you recommend?

- A. Use Windows authentication and set the Trusted Connection property of the SQL Server connection string to true
- B. Use Basic authentication and set the Integrated Security property of the SQL Server connection string to SSPI
- C. Use Basic authentication and impersonation to configure a trusted subsystem between servers
- D. Use Windows authentication and impersonation to configure constrained delegation between servers

---

**Answer: D**

---

---

**Question: 82**

---



You are designing an ASP.NET Web application. The Web application must allow users to authenticate by using LDAP on a Web form. You need to recommend an authentication model. What should you recommend?

- A. Change the authentication mode to Forms authentication, and use the `ActiveDirectoryMembershipProvider` class.
- B. Change the authentication mode to Windows authentication, and implement a custom authentication provider.
- C. Change the authentication mode to Forms authentication, and use the `ClientWindowsAuthenticationMembershipProvider` class.
- D. Change the authentication mode to Windows authentication, and use the `ActiveDirectoryMembershipProvider` class.

---

**Answer: A**

---

---

**Question: 83**

---

You are designing an ASP.NET Web application. The Web application must instruct proxy servers between the server and the browser to not cache content. You need to recommend an approach for instructing the proxy servers. What should you recommend?

- A. Use the `Response.Cache.SetVaryByCustom()` method with a value of no-proxy.
- B. Use the `Response.Cache.SetCacheability()` method with a value of `HttpCacheability.ServerAndPrivate`.
- C. Use the `Response.Cache.AppendCacheExtension()` method with a value of no-proxy.
- D. Use the `Response.Cache.SetNoTransforms()` method.

---

**Answer: B**

---

---

**Question: 84**

---

You are designing an ASP.NET Web application. A page of the Web application will contain a databound `ListView` control. You need to recommend a strategy for accessing individual rows within the `ListView` control from client-side script based on the value in a specific data field. What should you recommend?

- A. On the `ListView` control, set the `ClientIDMode` property to `Static` and set the `ClientIDRowSuffix` property to the name of the data field.
- B. On the `@>` Page directive, set the `SmartMavigation` property to `True` and set the `ClientIDMode` property to `AutoID`.
- C. On the `ListView` control, set the `ClientIDMode` property to `Predictable` and set the `ClientIDRowSuffix` property to the name of the data field.
- D. On the `@` Page directive, set the `AspCompat` property to `True` and set the `ClientIDMode` property to `Predictable`.

---

**Answer: C**

---

---

**Question: 85**

---

You are reviewing an ASP.NET Web application that uses dynamic SQL. The Web application validates user credentials against a Microsoft SQL Server 2008 database by using Forms authentication and hashing the password. You need to recommend an approach for testing whether users can gain elevated access to the Web application. What should you recommend?

- A. Perform unit tests that supply valid and invalid passwords

- B. Perform Web tests that supply valid and invalid passwords
- C. Perform SQL injection tests
- D. Perform penetration tests for cross-site scripting

---

**Answer: C**

---

---

**Question: 86**

---

You are designing an ASP.NET Web application that will be deployed both to a server that runs IIS 6 and to a server that runs IIS 7.0. The Web application must meet the following requirements:

- Log all unhandled exceptions.
- Write exception details to a custom error log.
- When an exception occurs, write the user credentials to a custom error log.

You need to recommend an approach for handling errors. What should you recommend?

- A. Create an error handler for the Application\_Error event.
- B. In the customErrors element of the Web.config file, set the mode attribute to on.
- C. In the customErrors element of the Web.config file, set the defaultRedirect attribute to errors.htm.
- D. Create an error handler for the HttpApplication.LogRequest event.

---

**Answer: A**

---

---

**Question: 87**

---

You are designing an ASP.NET Web application that will support multiple display languages. You have the following requirements:

- Change server control settings based on the selected language.
- Enable strongly typed access to the resource objects.

You need to recommend a strategy for localizing server control properties. Which strategy should you recommend?

- A. Wrap localized server controls with a Localize server control. In the App\_GlobalResources folder, create a resource file that contains localized values with keys named according to the <LocalizeId>.<ControlId>.<PropertyName> format.
- B. Use implicit resource expressions and store the resource file in the App\_LocalResources folder.
- C. Use explicit resource expressions and store the resource file in the App\_GlobalResources folder.
- D. Add the Localizable attribute to the control definitions in the code-behind. In the App\_LocalResources folder, create a resource file that contains localized values with keys named according to the <ControlId>.<PropertyName> format.

---

**Answer: C**

---

---

**Question: 88**

---

You are designing an ASP.NET Web application that will be accessed only by a proprietary user agent. The user agent is unable to read the default HTML encoding produced by the Web application. You need to recommend an approach for allowing the user agent to process the Web application output. What should you recommend?

- A. Create a class derived from System.Text.Encoder. In the Web.config file, add a pages element with the pageParserFilterType attribute set to the derived class type name.
- B. Create a class derived from System.Text.Encoder. In the browser definition file, add a capability element named

httpEncoding, with the type attribute set to the derived class type name.

C. Create a class derived from HttpEncoder. In the browser definition file, add a capability element named httpEncoding, with the type attribute set to the derived class type name.

D. Create a class derived from HttpEncoder. In the Web.config file, add an httpRuntime element with the encoderType attribute set to the derived class type name.

---

**Answer: D**

---

---

**Question: 89**

---

You are designing an ASP.NET Web application that targets multiple browsers and form factors. Some devices do not support the markup produced by a third-party server control. You cannot modify the third-party server control. You need to recommend an approach for providing the correct markup for the problematic devices. What should you recommend?

A. Derive a class from ControlAdapter that produces device-specific markup. In the browser definition file, add an entry in the controlAdapters collection for each of the problematic devices. In the entry, point to the third-party server control and adapter type.

B. Create an ASP.NET theme specific to each problematic device. In the page PreRender event, set the Theme property to the custom theme based on the value of the Request.Browser.Type property.

C. In the page PreRender event, call the Response.WriteSubstitution() method with a delegate. In the delegate, populate the page with device-specific markup based on the value of the Request.Browser.Type property.

D. Derive a class from the third-party server control. In the new server control, override the TemplateSourceDirectory property to return a value pointing to a file containing the device-specific markup.

---

**Answer: A**

---

---

**Question: 90**

---

You are designing an ASP.NET Web application. A page of the Web application will use the ASP.NET Calendar server control. Users will select the type of calendar from a drop-down list named CalendarType. The CalendarType list contains cultural preferences. You need to recommend an approach for rendering the calendar control based on the selected cultural preference. What should you recommend?

A. In the page code-behind, override the InitializeCulture() method and set the thread's CurrentUICulture property to a new instance of the CultureInfo class. Set the value of the DateTimeFormatInfo.Calendar property based on the Request.Form collection.

B. In the page code-behind, override the OnInit() method and set the thread's CurrentUICulture property to a new instance of the CultureInfo class. Set the value of the DateTimeFormatInfo.Calendar property based on the ViewState dictionary.

C. Create a Localize control and set its Mode attribute to Transform. Put the calendar control inside the Localize control.

D. Create a div element and set its lang attribute to the selected CalendarType value. Put the calendar control inside the div element.

---

**Answer: A**

---

---

**Question: 91**

---

You are designing the deployment strategy for an ASP.NET Web application. The database configuration string varies depending on the target environment. You have the following requirements:

- Deploy the application by using Web Deploy.
- Replace the connection string named AppDb with the appropriate value for each environment.

You need to recommend an approach for updating the AppDb connection string when deploying the application to the staging environment. Which two attributes should you add to the AppDb connection string entry in the Web.staging.config file? (Each correct answer presents part of the solution. Choose two.)

- A. xdt:Transform with the value "Replace"
- B. xdt:Transform with the value "XPath(configuration/connectionStrings[@name='AppDb'])"
- C. xdt:Locator with the value "Replace"
- D. xdt:Locator with the value "XPath(configuration/connectionStrings[@name='AppDb1'])"

---

**Answer: B, C**

---

---

**Question: 92**

---

You are modifying an ASP.NET Web application that uses session state. The Web application is deployed to a Web farm. You have the following requirements:

- Provide a reliable failover mechanism for session state data.
- Provide persistent storage of session state data.

You need to recommend a session state mode that meets the requirements. What should you recommend?

- A. Use SQL Server mode with a clustered Microsoft SQL Server database instance.
- B. Use State Server mode.
- C. Use In-Process mode.
- D. Use SQL Server mode with a network load balanced Microsoft SQL Server database.

---

**Answer: A**

---

---

**Question: 93**

---

You are designing a health monitoring strategy for an ASP.NET Web application. The Web application must raise failure events to correspond with key business process failures. You need to recommend an approach for ensuring that failure events can be consumed by the ASP.NET Health Monitoring framework. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. In the Web.config file, add an entry to the healthMonitoring/providers collection for the custom event class.
- B. Create a custom event class derived from the WebFailureAuditEvent class.
- C. Create a custom event class derived from the WebErrorEvent class.
- D. In the Web.config file, add an entry to the healthMonitoring/eventMappings collection for the custom event class.

---

**Answer: A, D**

---

---

**Question: 94**

---

An ASP.NET Web application is deployed on a single Web server. Web application state for client requests is stored in a Microsoft SQL Server 2008 database. The Web application must meet the following requirements:

- Tolerate a Web server failure.

- Scale gracefully to accommodate a rapid load increase.

You need to recommend an approach for accommodating a load increase. What should you recommend?

- A. Upgrade the CPU, memory, and disk space of the existing Web server.
- B. Transfer the Web application to a load-balanced Web farm.
- C. Set up a Web garden for the deployed application on the existing Web server.
- D. Partition the data in tables across multiple servers.

---

**Answer: B**

---



---

### Question: 95

---

You are designing the deployment strategy for an ASP.NET Web application that consists of multiple pages. The Web application will be deployed to a server that hosts multiple ASP.NET applications. The Web application design includes;

- Error pages named LoginErrors.htm and GenericErrorPage.htm.
- A subdirectory named Login that contains only the Login.aspx page.

You have the following requirements:

- Display the LoginErrors.htm page for all unhandled errors that are generated from the Login.aspx page.
- Display the GenericErrorPage.htm page for all other unhandled errors.

You need to recommend an approach for displaying the error pages. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Add the following XML element to the Web.config file in the root application directory:  
`<customErrors defaultRedirect="GenericErrorPage.htm" />`
- B. Add the following XML element to the Web.config file in the Login directory: <  
`customErrors defaultRedirect="LoginErrors.htm" />`
- C. Add the following XML element to the Machine.config file in the .NET Framework installation folder:  
`<customErrors defaultRedirect="LoginErrors.htm" />`
- D. Add the following XML element to the Machine.config file in the .NET Framework installation folder:  
`<customErrors defaultRedirect="GenericErrorPage.htm" />`

---

**Answer: A, B**

---



---

### Question: 96

---

You are conducting an architectural review of an existing ASP.NET Web application. The Web application uses only full-page postbacks, which degrades its performance. You have the following requirements:

- Extend existing controls by using AJAX functionality.
- Reduce the size of postbacks without modifying the existing controls.

You need to recommend an approach for meeting the requirements. What should you recommend?

- A. Create a user control that implements the IAsyncActionInvoker interface.
- B. Create a server control derived from the Substitution class.
- C. Create a user control that implements the IExtenderProvider interface.
- D. Create a server control derived from the ExtenderControl class.

---

**Answer: D**

---

---

**Question: 97**

---

You are designing an ASP.NET MVC 2 Web application. The Web application will display information from remote third-party Windows Communication Foundation (WCF) services on each page. You have the following requirements:

- Retrieve information from the WCF services.
- Specify a timeout period while retrieving information from third-party services.
- Cache responses from the third-party services for retrieval by multiple users.

You need to recommend an approach for retrieving information from the WCF service. What should you recommend?

- A. Use an asynchronous method.
- B. Implement the `IAsyncResult` interface on the models for the views.
- C. Implement the `IHttpAsyncHandler` interface on the models for the views.
- D. Use AJAX to asynchronously call the third-party services and display information.

---

**Answer: A**

---

---

**Question: 98**

---

You are designing an ASP.NET MVC 2 Web application. When the Web application is accessed through the . . . /Products/Categories URL, it will display a list of products sorted by category. You have the following requirements:

- The Web application design must be loosely coupled.
- The Web application must support unit testing of the data layer code.

You need to recommend a location for the code that maps and retrieves products from the data store. Which location should you recommend?

- A. A Model class named `ProductCategory`
- B. A View class named `ProductCategory`
- C. A Controller class named `ProductsController`
- D. A Controller class named `Products`

---

**Answer: D**

---

---

**Question: 99**

---

You are designing an ASP.NET Web application. Pages of the Web application will share a common layout. Different business logic will be executed based on user input. You have the following requirements:

- Use view state to maintain data between postbacks.
- Reuse presentation logic across multiple pages.

You need to recommend an approach that meets the requirements. What should you recommend?

- A. Use an ASP.NET Web Services application.
- B. Use ASP.NET MVC 2.
- C. Use an ASP.NET Web Forms- based framework.
- D. Use ASP.NET AJAX.

---

**Answer: C**

---

---

**Question: 100**

---

You are designing an ASP.NET MVC 2 Web application. A page of the Web application will display data retrieved from a Web service. The Web service performance is unpredictable.

You have the following requirements:

- Display a progress indicator while retrieving data.
- Display data in the same page from which it is retrieved.

You need to recommend a solution that meets the requirements. What are two possible solutions you could recommend? (Each answer presents a complete solution. Choose two.)

- A. In the view, set the Page directive Async attribute to true.
- B. Use the Ajax.BeginForm() method.
- C. Derive the controller from the AsyncController class.
- D. Use the jQuery.ajax() function.

---

**Answer: A, B**

---

---

**Question: 101**

---

You plan to upgrade a medium-trust Web application from ASP.NET 2.0 to ASP.NET 4. The Web application is hosted on a Web server that is running IIS 7.0. You have the following requirements:

- Support multiple permission sets in a single application domain.
- Honor the machine-level code access security policy.

You need to recommend an approach for preparing the Web application for the upgrade. What should you recommend?

- A. In the application pool settings, set the Managed Pipeline Mode setting to Classic.
- B. In the Web.config file, set the legacyCasModel attribute of the trust element to true.
- C. In the Web.config file, set the processRequestInApplicationTrust attribute of the trust element to true.
- D. In the application pool settings, set the Load User Profile setting to True.

---

**Answer: B**

---

---

**Question: 102**

---

You are designing an ASP.NET Web application. You need to recommend an approach for restricting access to internal application state information. What should you do?

- A. Set the trust level to Medium.
- B. Disable tracing and debugging.
- C. Install a certificate and enable SSL.
- D. Deploy a P3P policy to the Web site.

---

**Answer: B**

---

---

**Question: 103**

---

You are designing an ASP.NET Web application that will be accessed by local intranet users. The Web application will store temporary data files locally. The Web server is running IIS 7.5. You have the following requirements:

- Temporary data file ownership must be set to the user account.
- Temporary data files stored locally must be accessible only to the authenticated user.

You need to recommend an approach for securing the temporary data files. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Enable ASP.NET impersonation.
- B. Set the Load User Profile setting to True in the application pool configuration.
- C. Enable Windows authentication.
- D. Set the default role provider to the WindowsTokenRoleProvider class.

---

**Answer: A, B**

---

---

**Question: 104**

---

You deploy a medium-trust ASP.NET Web application to a Web server that runs IIS 7.0. The Web server hosts multiple Web sites. Web applications hosted on the Web server must not have access to the local resources of other Web applications hosted on the Web server. You need to recommend a deployment strategy. What should you recommend?

- A. Deploy each Web application in a separate application pool. Use the built-in ApplicationPoolIdentity account.
- B. Deploy all the Web applications in a single custom application pool.
- C. Deploy all the Web applications in the built-in DefaultAppPool application pool. Set the Managed Pipeline Mode setting to Classic.
- D. Deploy each Web application in a separate application pool. Create and use a single custom account.

---

**Answer: A**

---

---

**Question: 105**

---

You are designing a data validation strategy for an ASP.NET Web application. A page of the Web application includes multiple Panel controls. Each panel contains input controls, validator controls, and a Submit button. When a user clicks a Submit button, the Web application must validate only the values of the input controls on the panel containing that Submit button. You need to recommend an approach for validating the values. What should you recommend?

- A. For each panel, set the ValidationGroup property on all the validator controls and the Submit button to a unique value for the panel.
- B. Change each Panel control to an UpdatePanel control. Set aPostBackTrigger for the Submit button on the panel.
- C. For each panel, set the ValidationGroup property on the Submit button to a unique value and add a ValidationSummary control with the same value.
- D. Change each Panel control to an EditorZone control.

---

**Answer: A**

---

---

**Question: 106**

---

You are designing an ASP.NET MVC 2 Web application that requires each user to register a user name and password before accessing restricted content. You have the following requirements for user registration:

- When the focus leaves the user name input field, validate that the user name does not already exist.
- Display validation results before submitting the form.

You need to recommend a data validation strategy.

What should you recommend?



- A. Use the Required attribute to annotate the user name property of the model. Call the `Html.EnableClientValidation()` method from the view.
- B. Use an `UpdatePanel` control to access server-side validation.
- C. Implement the `IValidator` interface on the model.
- D. Use `jQuery` to access server-side validation code.

---

**Answer: D**

---

---

**Question: 107**

---

You are designing a data access strategy for an ASP.NET Web application. You plan to expose an existing data source by using WCF Data Services. You need to recommend an approach to ensure that CRUD operations are possible. What should you recommend?

- A. Implement the `IQueryable` and `IUpdatable` interfaces on data source entities.
- B. Implement the `IEnumerable` and `IEditableObject` interfaces on data source entities.
- C. Implement the `ILookup` and `IUpdatable` interfaces on data source entities.
- D. Implement the `IContainer` and `IEditableObject` interfaces on data source entities.

---

**Answer: A**

---

---

**Question: 108**

---

You are designing an exception-handling strategy for an ASP.NET Web Forms application. The Web application will use Windows authentication. The Web application must meet the following requirements:

- Display a user-friendly error message to users.
- Display a detailed error message to server administrators.

You need to recommend an approach for handling exceptions. What should you recommend?

- A. Add a `HandleError` attribute to each controller class.
- B. In the custom `Errors` element of the `Web.config` file, set the `mode` attribute to `remoteOnly`.
- C. On the assembly, add a `SecureRules` attribute with the security rule set configured to level 2.
- D. In the `Application_Error` event handler, wrap the exception in an `ExternalException` exception. Re-throw the exception if the user is not a member of the `Administrators` group.

---

**Answer: B**

---

---

**Question: 109**

---

An ASP.NET Web application connects to a Microsoft SQL Server 2008 database. Multiple users access the database. The `Web.config` file includes a database connection string. The Web application uses Windows authentication and impersonation. Anonymous access is turned off. You need to recommend an approach for pooling database connections between users. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. In the connection string, set the `Integrated Security` parameter to `true`.
- B. In the connection string, specify a user name and password.
- C. Do not explicitly close connections.

D. Explicitly close connections.

---

**Answer: A, C**

---



---

**Question: 110**

---

An ASP.NET Web application contains a class named Money. The Money class has properties named Value and Currency. The Locals window of the Microsoft Visual Studio 2010 IDE currently displays the Value and Currency properties only when the Money object is expanded. You have the following requirements:

- Display the Value and Currency property values in the Locals window.
- Display the property values without requiring the developer to expand the Money object.

You need to recommend an approach for modifying the Money class to meet the requirements. What should you do?

- A. In the Value and Currency property setters, call the Debug.WriteLine() method.
- B. Apply the DebuggerDisplay attribute to the class.
- C. Modify the class to inherit from the LocalVariableInfo class. Override the IsPinned property to return True.
- D. In the constructor, create a new instance of the LocalItemDescription class for each of the Value and Currency properties.

---

**Answer: B**

---



---

**Question: 111**

---

An ASP.NET Web application hosted on a remote server throws NullReferenceException exceptions that are not handled. The stack trace does not include line numbers. The Microsoft Visual Studio 2010 remote debugging tools are installed on the remote server. You need to recommend an approach for identifying the line of code that is causing the exception. What should you recommend?

- A. Deploy the PDB files for the assemblies to the remote server. Inspect the Application event log.
- B. Set the project-level Enable Code Analysis on Build property to true. Inspect the Application event log.
- C. Set the project-level Enable optimizations property to false. Attach the debugger to the remote worker process.
- D. In the Web.config file, set the debug value to true. Attach the debugger to the remote worker process.

---

**Answer: A**

---

**Case Study: 5**

**Case Study Name: VB Adventure Works**

**Tab ID: 1**

**Tab ID Name: BACKGROUND**

**Tab ID Text:**

Adventure Works is a retail operation with facilities in English-speaking and Spanish-speaking countries. Adventure Works plans to begin selling its products online. As a first step, the company will develop a customer-facing shopping cart. You are a senior developer hired by the company to lead the development of the new solution.

**Tab ID: 2**

**Tab ID Name: BUSINESS REQUIREMENTS**

**Tab ID Text:**

Your solution must meet the following business requirements. General. The Web application must support the English and Spanish languages, and must display all information in the end user's language and culture. The Web application

must handle errors gracefully. If an error occurs, the Web application must send a notification.

**Tab ID: 3****Tab ID Name: User Interface****Tab ID Text:**

The Web application must support two groups of users: customers and administrators. The Web application must have a separate interface for each user group.

The customer-facing interface has the following associated requirements:

- Customers must create user accounts.
- The customer-facing interface must include the online store and a page that displays shopping cart content.
- Customers must submit orders from the shopping cart page.
- Customers must log in to user accounts to submit orders.
- Customers must be able to upload image files to the Web application.
- The online store must include products that can be customized with the image files uploaded by the customer.

The administrative interface has the following associated requirements:

- The administrative interface must include tools for managing inventory, users, and sales, and tools for viewing reports.
- Administrators must be able to change the appearance of the Web application for specific holidays without redeploying the application.

**Tab ID: 4****Tab ID Name: TECHNICAL REQUIREMENTS****Tab ID Text:**

Your solution must meet the following technical requirements.

**Tab ID: 5****Tab ID Name: Hardware****Tab ID Text:**

You must use only your existing hardware, which consists of three servers that run Windows Server 2008 R2. The web application must be load balanced among the three servers.

**Tab ID: 6****Tab ID Name: Development Environment****Tab ID Text:****Development Environment**

The Web application must be developed by using Microsoft Visual Studio 2010 and ASP.NET 4. Debugging of server-side and client-side code must be performed by using Visual Studio 2010. A staging server will be used to validate all changes before deploying to production.

**Tab ID: 7****Tab ID Name: General****Tab ID Text:**

All solutions must be scalable.

All solutions must minimize bandwidth usage.

Techniques used for implementation must result in a codebase that is easy to maintain.

The application pool must be configured to run using the Network Service account.

Session state must be persisted between server farm restarts.

Changes that administrators make to the application's appearance must affect all images and styles across the entire application.

**Tab ID: 8****Tab ID Name: Security****Tab ID Text:**

The Web application must authenticate users by using Forms authentication. The least-privileged NTFS permission

level must be applied to the file system.

**Tab ID: 9**

**Tab ID Name: Coding**

**Tab ID Text:**

Server-side code and client-side code generated by developers must not be mixed.

Error handling must be managed at a global level. All data must be represented as entity objects in a separate class library that will be available for future projects. The shopping cart content page must be developed by using a GridView control.

You have the following requirements for the use of classes:

- Secured pages must inherit the CustomPage class.
- The CustomPage class must inherit from the Page class.
- The administration pages must inherit the CustomManagementPage class.
- The CustomManagementPage class must be derived from the CustomPage class.

**Tab ID: 10**

**Tab ID Name: File Storage**

**Tab ID Text:**

Certain types of files must be stored in specific folders on the web application server:

- Store all pages requiring authentication in a folder named Secured.
- Store all images uploaded by customers in a folder named Upload.

---

### Question: 1

---

You need to design a solution for implementing holiday-specific site changes. Which approach should you recommend?

- A. Create a single master page, and change its images and styles dynamically in the code-behind file.
- B. Create one master page for each holiday. In each master page, reference the styles and images for the specific holiday.
- C. For each holiday, create a theme that contains the related images and styles. Include a skin file, and reference the images within the master page with a SkinID.
- D. For each holiday, create a theme that contains the related images and styles. Include a skin file, and reference all images within the web application with a SkinID.

---

**Answer: D**

---

---

### Question: 2

---

You need to design a solution for the protection of the pages in the Secured folder. Which approach should you recommend?

- A. Use Code Access Security.
- B. Use the Personalization API.
- C. Use Software Restriction Policies.
- D. Use the Authorization element of web.config.

---

**Answer: D**

---

---

### Question: 3

---

You need to design an exception-handling strategy for the Web application. Which approach should you recommend?

- A. Add a customErrors section in the configuration file, with mode="On" and default Redirect="/error.aspx".
- B. Add a customErrors section in the configuration file, with mode="RemoteOnly" and defaultRedirect="/error.aspx".
- C. Catch all unhandled exceptions in the Page\_Error event of each page, send an e-mail message containing the exception details, clear all errors, and redirect the user to a generic error page.
- D. Catch all unhandled exceptions in the Application\_Error event of the Global.asax file, send an e-mail message containing the exception details, clear all errors, and redirect the user to a generic error page.

---

**Answer: D**

---

---

**Question: 4**

---

You need to recommend a debugging strategy for JavaScript code on the shopping cart page. Which approach should you recommend?

- A. Use of the Microsoft Script Debugger
- B. Use of the Internet Explorer Developer Tools
- C. Attaching a debugger to the Internet Explorer process
- D. Attaching a debugger to the Web development server process

---

**Answer: C**

---

---

**Question: 5**

---

You need to design a solution that supports the end user display requirements for data and graphics. Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Use a language-specific master page
- B. Replicate each page once for each supported language
- C. Create a local resource file for each page and for each language.
- D. Populate the database with data in each language, and retrieve the data in the user's language.

---

**Answer: C, D**

---

---

**Question: 6**

---

You need to ensure that unauthorized users do not have access to the administration pages. Which approach should you recommend?

- A. Check whether the user has access in the Page\_Load method of every administration page by using the User, IsInRole("Admin") method.
- B. Override the OnInit event of the Custom Page class, and then check whether the user has access.
- C. Override the On Load event of the Custom Page class, and then check whether the user has access.
- D. Decorate the Custom Management Page class with the Principal Permission attribute, demanding access for the Admin role.

---

**Answer: D**

---

---

**Question: 7**

---

You need to design a solution for storing sessions in the application. Which approach should you recommend?

- A. Use in Proc mode
- B. Use SQL Server mode
- C. Use State Server mode
- D. Use a custom mode with session data saved in the cache

---

**Answer: B**

---

---

**Question: 8**

---

You need to incorporate a data access layer to meet the requirements. Which solution should you recommend?

- A. an Entity Data Model created by using the Entity Framework within the Web project
- B. a class that is stored in the app\_code folder of the Web project, uses ADO.NET, and returns DataSets
- C. a separate data access project that includes an Entity Data Model created by using the Entity Framework
- D. a separate data access project that queries the database by using ADONET and returns DataSets

---

**Answer: C**

---

---

**Question: 9**

---

You need to design a solution for accessing the shopping cart controls by using JavaScript. Which configuration should you recommend?

- A. Use <% control.ID %>.
- B. Use <% control.ClientID %>.
- C. Use ClientIDMode="AutoID".
- D. Use ClientIDMode="Predictable".

---

**Answer: D**

---

---

**Question: 10**

---

You need to design a solution for incorporating NTFS permissions in the Web application. Which two approaches should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. Grant the Network Service account only Read permission to the root directory.
- B. Grant Read permission and Write permission to the root directory
- C. Grant the Network Service account Full Control permission to the Upload folder.
- D. Grant the Network Service account Read permission and Write permission to the Upload folder.

---

**Answer: A, D**

---

---

**Question: 11**

---

You need to design a solution for calling a server-side method of the code-behind file from JavaScript. Which approach should you recommend?

- A. Use Page Methods.
- B. Use an Update Panel control.
- C. Use an Update Progress control.
- D. Configure the server-side method to return a JsonResult.

---

**Answer: A**

---

## Case Study: 6

**Case Study Name: VB Blue Yonder Airlines**

**Tab ID: 1**

**Tab ID Name: BACKGROUND**

**Tab ID Text:**

You are a senior developer at Blue Yonder Airlines. The company has an existing Web application that was written by using Classic ASP and COM+. It has become increasingly difficult to maintain the non- object oriented code. Ongoing growth has made the current security implementation unreliable in the defense of the attack surface. An increased user base has introduced scalability and performance problems. After several project planning sessions, the architecture team has decided that the Web application must be rewritten to increase security, allow better scalability, improve maintainability of source code, and implement best practices.

**Tab ID: 2**

**Tab ID Name: BUSINESS REQUIREMENTS**

**Tab ID Text:**

Your solution must meet the following business requirements.

## Case Study: 3

**Tab ID Name: Security**

**Tab ID Text:**

All users of the Web application must have a user name, a password, and one or more roles assigned. You must support dynamic updates to roles and permissions from within the Web application. Specific areas of the Web application must be secured to prevent access by unauthorized users. Due to security concerns, the use of persistent cookies is not allowed. However, the use of session cookies is allowed.

**Tab ID: 4**

**Tab ID Name: Data Access**

**Tab ID Text:**

The Web application must use a Microsoft SQL Server 2008 data store. In addition, the Web application must provide the capability to connect to and display third-party data.

The database will store a list of news items and news categories that have the following associated requirements:

- The Web application must allow users to specify a news category for entry or retrieval of news items.
- When the user begins entering a news category name, the Web application must display categories matching the entered text without submitting a form.
- News items that are posted in the Web application must be exposed to visitors by using RSS feeds.
- The news feeds must be retrieved from the database and formatted by using the Rss20FeedFormatter class.

**Tab ID: 5**

**Tab ID Name: Exception Management**

**Tab ID Text:**

All exceptions within the Web application must be logged.

All application exceptions must be handled at the controller level.

If an exception occurs, the Web application must display a user-friendly error message.

**Tab ID: 6**

**Tab ID Name: TECHNICAL REQUIREMENTS**

**Tab ID Text:**

Your solution must meet the following technical requirements.

**Tab ID: 7**

**Tab ID Name: Development Environment**

**Tab ID Text:**

The Web application must be rewritten by using Microsoft Visual Studio 2010 and ASP.NET 4.

**Tab ID: 8**

**Tab ID Name: Deployment**

**Tab ID Text:**

The Web application will be deployed to a Web farm that contains three round-robin load-balanced web servers. An ASP.NET 1.1 web application currently resides within the same web farm. You must deploy the Web application by using a single package that will copy the Web application files, modify the registry, add a new application to IIS and execute SQL scripts. After your Web application is deployed, the ASP.NET 1.1 Web application must continue to operate as usual.

**Tab ID: 9**

**Tab ID Name: Project Configuration**

**Tab ID Text:**

The web application must be developed by using ASP.NET MVC 2 and the built-in webFormsviewEngine view engine. The Web application must have the capability to store debug and release configuration information separately.

**Tab ID: 10**

**Tab ID Name: Data Access**

**Tab ID Text:**

The Web application must connect to data sources by using object-relational mapping (ORM). The built-in classes must be used to manage users, personal preferences, and permissions.

**Tab ID: 11**

**Tab ID Name: Reusability**

**Tab ID Text:**

To improve code maintainability, any user-interface code that can be reused in multiple locations of the Web application must be encapsulated in a single control, plug-in, or class.

---

**Question: 1**

---

You need to design a solution for programmatically adding reusable user-interface code to views and allowing the user-interface code to be rendered from the server side. Which approach should you recommend?

- A. Create a jQuery library plug-in.
- B. Create an HtmlHelper extension method.
- C. Create a controller that returns an ActionResult.
- D. Create a Web Form server control that stores values in ViewState.

---

**Answer: B**

---

---

**Question: 2**

---



You need to design a solution for capturing an exception. Which approach should you recommend?

- A. Use a Page\_Error method.
- B. Use a HandleError attribute.
- C. Use a customErrors element.
- D. Use an Application\_Error method.

---

**Answer: B**

---

---

**Question: 3**

---

You need to plan for authentication and authorization of Web application users. Which approach should you recommend?

- A. Use the Membership API.
- B. Use the Personalization API.
- C. Use the Local Security Policy.
- D. Use the Group Policy Manager.

---

**Answer: A**

---

---

**Question: 4**

---

You need to design a deployment solution for the rewritten Web application. Which approach should you recommend?

- A. Use MSDeploy and FTP.
- B. Use DB Deployment and FTP.
- C. Use MSDeploy and One-Click Publishing.
- D. Use DB Deployment and One-Click Publishing.

---

**Answer: C**

---

---

**Question: 5**

---

You need to design an automation solution for the final-release build process. Which approach should you recommend?

- A. Use Web application configuration file transforms.
- B. Create a custom configuration section for each build configuration value.
- C. Append the Config Source attribute to each application configuration section.
- D. Duplicate each configuration section for the debug build configuration, and modify the settings for the release build configuration.

---

**Answer: A**

---

---

**Question: 6**

---

You need to recommend appropriate technologies for designing Web forms for entry and retrieval of news items. Which technologies should you recommend? (Each correct answer presents a complete solution. Choose two.)

- A. ASMX and SOAP
- B. WCF Data Services and jQuery
- C. ASP.NET MVC 2 and Microsoft AJAX
- D. Entity Framework and Microsoft Silverlight

---

**Answer: B, C**

---

---

**Question: 7**

---

You need to design a solution to ensure that data caching and session state will be maintained. Which approach should you recommend?

- A. Use distributed caching and out-of-process session state.
- B. Use distributed caching and in-process session state.
- C. Use output caching and out-of-process session state.
- D. Use output caching and in-process session state.

---

**Answer: A**

---

---

**Question: 8**

---

You need to design the application to support the RSS news feature. Which approach should you recommend?

- A. Use the `FileResult` class and return the result as a plain text file.
- B. Use the `ViewResult` class and bind the items to an `HTML.TextArea` HTML Helper.
- C. Use a custom `ActionResult` class and return the output stream as the return value.
- D. Use a custom `ActionResult` class and bind the items to an `HTML.TextArea` HTML Helper.

---

**Answer: C**

---

---

**Question: 9**

---

You need to design session state management for the rewritten Web application. Which approach should you recommend?

- A. Use the same machine key element attributes and values across all three servers.
- B. Use different machine key element attributes and values across all three servers.
- C. Use a persistent cookie to store the authentication ticket.
- D. Use a third-party cookie to store the authentication ticket.

---

**Answer: A**

---

---

**Question: 10**

---

You need to design a solution for ensuring that only users with the Administrators role have access to the Admin area of the Web application. Which approach should you recommend?

- A. Choose to include the LoginView control within each file in the Admin area.
- B. Allow only the local computer Administrator account to have NT permissions on the files contained in the Admin area.
- C. Establish an authorization section in each location section in the Web application configuration files for each area that needs to be secured.
- D. Ensure that each ActionResult returned to the Admin area contains the Authorize attribute and the appropriate properties.

---

**Answer: D**

---