

GIAC GIAC Secure Software Programmer - C#.NET

GIAC GSSP-NET-CSHARP

Version Demo

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QUESTION NO: 1

You work as a Software Developer for ABC Inc. You develop an application using Visual Studio .NET 2005. You want to print the contents of a document named MyFile1.doc located on the local computer. Therefore, you use the printing controls in the application. Which of the following events will you use in the application code to accomplish the task?

- A. EndPrint
- B. QueryPageSettings
- C. PrintPage
- D. BeginPrint

ANSWER: C

Explanation:

PrintPage is the event used to render a document's content onto each page sent to the printer. In a Windows Forms application, code handling the `PrintDocument.PrintPage` event receives `PrintPageEventArgs`, which provides a `Graphics` object. The application uses that graphics surface to draw text, images, lines, or other document content within the printable area. This is therefore the point at which the program supplies the actual content that will appear on the printed page.

The event is raised once for each page that must be printed. If the document has more content after the current page is rendered, the handler sets `e.HasMorePages` to `true`; the printing framework then raises the event again for the next page. For a file such as `MyFile1.doc`, the application must first obtain or interpret the file's content as appropriate, then draw the intended output during **PrintPage**. Microsoft documents this event as occurring when the output is printed and identifies it as the event in which printing output is generated. See [PrintDocument.PrintPage Event](#) and [Windows Forms printing guidance](#).

QUESTION NO: 2

You work as a Software Developer for SunSoft Inc. The company uses Visual Studio .NET 2005 as its application development platform. You use .NET Framework 2.0 to create several Windows applications. All applications use a common class library assembly named Customers. You deploy the application to the client computers on your company's intranet. Later, you modify the assembly. Any application that uses version 1.0.0.0 must now use version 2.0.0.0. Which of the following options will you use to accomplish the task?

- A. Modify the Publisher Policy file containing a reference to Customers.
- B. Modify the application configuration file for Customers.
- C. Modify the reference path for Customers.
- D. Modify the machine configuration file on your client computers.

ANSWER: A

Explanation:

Modify the Publisher Policy file containing a reference to Customers. is correct because publisher policy is the .NET Framework mechanism intended for an assembly publisher to redirect all applications that use a shared, strongly named assembly from one version to another. A publisher policy assembly contains configuration information specifying an assembly-binding redirect, such as redirecting requests for Customers version 1.0.0.0 to version 2.0.0.0. When the common assembly has been updated and deployed, the publisher policy can be installed so that the runtime applies the redirect for the applications on the intranet without requiring each application to be rebuilt or individually reconfigured. This is appropriate when the publisher determines that the newer assembly version is compatible for the applications using the earlier version. The policy is deployed with the shared assembly infrastructure and is evaluated by the runtime during assembly binding. Microsoft documents that publisher policy assemblies provide version redirection for shared assemblies and describes their

use as a way for assembly publishers to distribute binding policy. See [Create a publisher policy assembly](#) and [Redirect assembly versions](#).

QUESTION NO: 3

Martha works as a Software Developer for HiTech Inc. She develops a Web application named

SalesApp that contains a Web page named MyWebForm1.aspx. The Web page contains validation controls for the Web server controls on the page. Martha wants the custom validation error message to display if the validation fails to call the validation control on the Web page. Which of the following actions will Martha take to accomplish the task?

Each correct answer represents a part of the solution. Choose all that apply.

- A. Call the `Validate` method of the validation control.
- B. Check the `IsValid` property of the validation control.
- C. Handle the `Page_Init` event handler.
- D. Handle the `Page_Load` event handler.

ANSWER: A B D

Explanation:

Calling the `Validate` method of the validation control explicitly causes that validator to evaluate its associated input or custom server-side validation logic. This is useful when validation must be invoked programmatically rather than relying solely on automatic validation triggered by a validating control. After validation has run, checking the validation control's `IsValid` property determines whether its validation succeeded. When it is `false`, the validator can render its configured error text, including a custom error message, provided the validator is enabled and visible in the page's validation output.

The code should be placed in the `Page_Load` event handler when the application needs to run the validation as part of normal page processing. In that handler, Martha can invoke `Validate()`, inspect `IsValid`, and take any required application action while allowing the validator's error message to be displayed. ASP.NET Web Forms validators participate in the page lifecycle and expose server-side validation state through `IsValid`. Microsoft documents validator behavior and programmatic validation in its [BaseValidator.Validate Method](#) reference and describes Web Forms validation controls in the [ASP.NET Validation Controls overview](#).

QUESTION NO: 4

You work as a Software Developer for ManSoft Inc. The company uses Visual Studio.NET 2005 as its application development platform. You have recently created an application that includes the code shown below.

```
string str1 = "ABC";  
  
string str2 = "u";  
  
str2 += "Certify";  
  
Console.WriteLine(str1 == str2);  
  
Console.WriteLine((Object) str1 == (Object) str2);  
  
Console.WriteLine(str1.Equals(str2));
```

What will be the output of the above code?

- A. TrueTrueTrue
- B. TrueFalseTrue
- C. FalseFalseFalse

ANSWER: C

Explanation:

The output is **False, False, False**. Initially, `str1` contains the three-character value "ABC". The `str2` variable starts as "u", and the `+=` operation concatenates "Certify", producing "uCertify". Therefore, the two strings do not have the same character sequence.

For variables whose compile-time type is `string`, the `==` operator uses the string equality operator and compares their textual values. Since "ABC" and "uCertify" differ, the first expression prints `False`. Casting both operands to `Object` causes the object equality operator to be used, which checks whether both operands refer to the same object instance. These strings are distinct instances, so the second expression also prints `False`. Finally, `String.Equals` performs an ordinal, case-sensitive comparison when called as shown; because the values differ, it prints `False`. Microsoft documents string comparisons and the string equality operators at [Compare strings in C#](#) and the `String.Equals` method at [String.Equals Method](#).

QUESTION NO: 5

You work as a Web Application Developer for ABC Inc. The company uses Visual Studio .NET as its application development platform. You create a Web application using the .NET Framework.

The application uses a MS SQL server database. The application creates and manages online advertising campaigns. You need the Web application to track the effectiveness of the forthcoming campaigns by evaluating advertising results with operation parameters. This necessitates adding a Web form that executes the following tasks:

I It uses a target URL for all online advertising.

I It logs the referrer URLs.

I It offers live reporting of referral data.

You are required to find out the most effective storage mechanism to log the referral data. What will you do?

- A. Use an application log.
- B. Use a standalone application file.
- C. Use HTTP modules
- D. Use a database.
- E. Use a text file.

ANSWER: D

Explanation:

Use a database. Referral information is structured, high-volume application data that must support timely reporting, filtering, grouping, and aggregation. Since the web application already uses Microsoft SQL Server, persisting each referral event in a relational table gives the application a durable, centralized store that can be queried efficiently for campaign measurements such as referral counts, referring URLs, timestamps, target URLs, and other operational parameters. Appropriate indexes can support live or near-real-time reporting without requiring the application to scan and parse unstructured records. A database also supports concurrent writes from multiple web requests, transactional integrity where needed, access control, retention policies, backups, and reporting tools. The table design can normalize campaign information while retaining event-level referral records, allowing reports to associate each referral with the relevant advertising campaign and target URL. Parameterized database commands should be used when storing request-derived values, including referrer data, to prevent SQL injection and to preserve data integrity. Microsoft documents SQL Server as a relational database platform for storing and querying structured data, and ADO.NET provides the .NET data-access model for connecting to and working with databases. See [Microsoft SQL Server documentation](#) and [ADO.NET overview](#).

QUESTION NO: 6

Which of the following files are necessary when deploying IP phone auto version upgrade? (Multiple Choice)

- A. Version upgrade file in binary mode
- B. Upgrade policy file
- C. Directory
- D. Log file

ANSWER: A B

Explanation:

Automatic IP-phone version upgrades require both the actual firmware payload and instructions that control whether and how devices obtain that payload. **Version upgrade file in binary mode** is required because it contains the phone software image that the device downloads and installs. The upgrade server must make this binary available using the configured transfer method, such as HTTP, HTTPS, FTP, or TFTP, with an appropriate path and access configuration.

Upgrade policy file is also required because it supplies the upgrade decision logic and parameters. In a managed deployment, this policy identifies the target version and can define applicable device models, upgrade timing, server location, and other conditions that allow a phone to determine that an upgrade is available and should be performed. Separating the policy from the binary image supports centrally controlled, consistent rollout behavior across a phone population. This approach aligns with the general device-management model in which configuration instructs endpoints where to retrieve software and which release to apply. For background on secure firmware-update design and deployment controls, see [NIST SP 800-193](#) and Microsoft's [TLS guidance for WinHTTP](#), which is relevant when a secure HTTPS-based download service is used.

QUESTION NO: 7

An MTU board supports four EI/TI interfaces. Which of the following statements is CORRECT about how to switch between EI and TI interfaces?

- A. Log in to the U1900 web interface, choose Quick Setup > Configure Board, and select EI or TI under Parameter configuration > Transmission mode.
- B. The default interface is EI. To switch to the TI interface, remove the jump cap in the MTU board and modify the configuration on the U1900 web interface.
- C. The default interface is TI. To switch to the EI interface, remove the jump cap in the MTU board and modify the configuration on the U1900 web interface.
- D. None of the above

ANSWER: B

Explanation:

The correct procedure is: "The default interface is EI. To switch to the TI interface, remove the jump cap in the MTU board and modify the configuration on the U1900 web interface." The board's physical jumper setting establishes the electrical interface mode, so changing the interface type is not merely a web-management setting. With the default jumper arrangement, the ports operate in E1 mode. Removing the specified jumper cap changes the board's hardware selection to support T1 operation. The administrator must then update the corresponding transmission-mode setting in the U1900 web interface so that the software configuration matches the board's physical state. This coordinated hardware-and-software process is important because E1 and T1 have different framing and line-rate characteristics; the management configuration must therefore reflect the selected interface type before the port is placed into service. Huawei publishes product documentation and support materials through its [Enterprise Support portal](#), where the applicable U1900 documentation can be located by product and release. For background on the E1 digital hierarchy interface characteristics underlying this configuration, see the ITU-T [Recommendation G.703](#).

QUESTION NO: 8

You work as a Software Developer for ABC Inc. The company uses Visual Studio.NET 2005 as its application development platform. You create a Web service using .NET Framework 2.0. You want the Web service to utilize a two step process to map XML generated by Web methods to .NET objects. What will you do to accomplish the task?

Each correct answer represents a part of the solution. Choose two.

- A. Use deserialization
- B. Use serialization
- C. Use Marshal-by-ref objects
- D. Use Marshal-by-value objects

ANSWER: A B

Explanation:

Use serialization and **Use deserialization** are the two parts of the XML-to-object mapping process used by ASP.NET Web services. Serialization converts a .NET object, including the values of its public serializable members, into an XML representation suitable for a SOAP message. When a Web method returns an object, ASP.NET serializes that return value into the XML carried in the service response. This establishes a platform-neutral wire format, allowing clients built with compatible technologies to consume the data.

Deserialization performs the complementary operation. When XML arrives in a SOAP request or response, the framework interprets the XML elements and values according to the service contract and reconstructs the corresponding .NET object graph. For example, request XML can be deserialized into a Web method parameter object, while response XML can be deserialized into a client-side proxy type. Together, serialization and deserialization provide the required two-step translation between in-memory .NET objects and XML exchanged by Web methods. The XML serialization mechanism is documented by Microsoft in [Introducing XML serialization](#) and its use for ASP.NET XML Web services is described in [XML serialization in XML Web services](#).

QUESTION NO: 9

Assume that the prefix Oil has been configured on the U1960. For details, see the following figure. Which of the following statements are CORRECT? (Multiple Choice)

Prefix ^a	Service type	Call property	Minimum number length ^b	Maximum number length ^b	Office route selection code
011	Basic service	National toll call	0	32	10

- A. User A with default rights can dial numbers starting with Oil. Then, calls are routed through office route selection code 10.
- B. User A with common rights can dial numbers starting with Oil. Then, calls are routed through office route selection code 10.
- C. User A with advanced rights can dial numbers starting with Oil. Then, calls are routed through office route selection code 10.
- D. User A with the international toll call rights can dial numbers starting with Oil. Then, calls are routed through office route selection code 10.

ANSWER: C D

Explanation:

User A with advanced rights can dial numbers starting with Oil. Then, calls are routed through office route selection code 10. User A with the international toll call rights can dial numbers starting with Oil. Then, calls are routed through office route selection code 10. These results follow the U1960 prefix-analysis and toll-rights model: a configured dialing prefix is associated with a required user calling-rights level and with the route-selection information used for subsequent outbound

call processing. A user whose rights meet the configured advanced level is permitted to use the prefix, and international toll-call rights represent a higher authorization level that also satisfies this requirement. After the prefix is accepted during digit analysis, the system applies office route selection code 10, so the call is sent for routing according to the route configuration associated with that code. This separation between authorization to dial a prefix and selection of the outgoing office route is important: the rights setting controls whether User A may originate the call, while the configured route-selection code determines the routing treatment after the number is accepted. Huawei provides product documentation and configuration resources through its [U1960 support page](#) and its [enterprise documentation portal](#).

QUESTION NO: 10

You work as a Software Developer for ABC Inc. You develop a Windows-based application named MyApp. The application contains a form named MyForm1 that displays a submit form for registered users. You want to implement a user interface for the application. Which of the following requirements will you consider for the user interface?

Each correct answer represents a complete solution. Choose all that apply.

- A. The application saves the user-entered data and checks the integrity of the data.
- B. The application components are allowed to handle logging of user-entered data.
- C. The user-entered data are validated through the validation checks applied in the Windows Forms controls.
- D. Users are allowed to enter data in the required fields on the form.

ANSWER: C D

Explanation:

The user-entered data are validated through the validation checks applied in the Windows Forms controls. This is a core user-interface requirement because a Windows Forms application should provide prompt, understandable feedback while a user is completing a form. Controls can participate in validation through events such as `Validating` and `Validated`; validation logic can prevent focus from moving away from an invalid control and display an error indication. Such UI validation helps ensure required values are present and that entered values satisfy expected format, range, and type constraints before the submission workflow proceeds. Microsoft documents the Windows Forms validation model at [Windows Forms validation](#).

Users are allowed to enter data in the required fields on the form. A usable submission interface must expose the required input fields and permit registered users to supply the information needed to complete the transaction. The interface should clearly identify required fields, use suitable input controls, and support ordinary keyboard interaction and accessibility. Together with validation, permitting data entry enables users to provide complete form data while receiving immediate guidance for omissions or invalid values. These practices align with the Windows Forms guidance for controls and user input described in [Windows Forms controls](#).

QUESTION NO: 11

You work as a Software Developer for ManSoft Inc. The company uses Visual Studio.NET 2005 as its application development platform. The company wants you to develop an application that implements a dynamic data structure for storing valuable data of different types (String, Integer, etc). You develop the application and implement the generic dynamic data structure that can be increased or decreased as and when required. You want to read the data from the data structure. Which of the following enumerators will you use to accomplish the task?

- A. `LinkedList.Enumerator`
- B. `Stack.Enumerator`
- C. `Queue.Enumerator`
- D. `List.Enumerator`

ANSWER: A

Explanation:

`LinkedList<T>.Enumerator` is the appropriate enumerator for reading elements in a generic linked list. `LinkedList<T>` is a dynamic collection whose elements are represented by linked nodes rather than a fixed-size array. Nodes can be added and removed as application requirements change, making the collection suitable when the number of stored values must grow or shrink dynamically. The generic type parameter `T` lets the application create a linked list for a specified data type, such as `string` or `int`, while retaining compile-time type safety.

The nested `Enumerator` structure supports sequential traversal of the linked list. It is commonly obtained through `GetEnumerator()`, or implicitly by a `foreach` statement. Each successful call to `MoveNext()` advances through the list, and `Current` provides the current typed element. This provides a safe, standard way to read each value without exposing or manipulating the linked-list nodes directly. Microsoft documents that `LinkedList<T>` implements generic enumeration and exposes its dedicated enumerator structure; see [LinkedList<T> documentation](#) and [LinkedList<T>.Enumerator documentation](#).

QUESTION NO: 12

The U1900 main control board provides the following functions() (Multiple Choice)

- A. Generating original CDRs
- B. Processing and converting protocols such as SIP and H.248
- C. Voice codec standards such as G.711 and G.723
- D. TDM switching

ANSWER: A B D**Explanation:**

The U1900 main control board is responsible for centralized call-control and service-control work within the device. Accordingly, generating original CDRs is a main-control function: the board records call-detail information produced during call handling so that the system can later use it for billing, auditing, operational reporting, and troubleshooting. Processing and converting protocols such as SIP and H.248 is also consistent with the board's signaling and control role. SIP is used to establish, modify, and terminate communication sessions, while H.248 provides a control relationship between a media gateway controller and media gateways. The control board must interpret and coordinate this signaling so calls can be established across connected networks and media resources. TDM switching is likewise a core platform function because it establishes the time-slot connections required for circuit-based traffic and integration with traditional telephony interfaces. Together, these capabilities let the U1900 control signaling, maintain call records, and coordinate circuit-switched connectivity. The relevant protocol responsibilities are defined by the [SIP specification](#) and the [H.248/Megaco specification](#).

QUESTION NO: 13

You work as a Software Developer for ABC Inc. The company uses Visual Studio .NET as its application development platform. You create a Windows Forms application by using the .NET Framework. The application executes a background thread. You are required to create the thread to exit, but you must also inform the main thread when the background thread has finished. What will you do to accomplish this?

- A. Call the `Join` method of the `Thread` class.
- B. Call the `Sleep` method of the `Thread` class.
- C. Call the `Abort` method of the `Thread` class.
- D. Call the `Interrupt` method of the `Thread` class.

ANSWER: A**Explanation:**

Call the `Join` method of the `Thread` class. `Thread.Join` provides a synchronization point between the thread that calls it and the target worker thread. When the main thread calls `Join()`, it waits until the background thread has terminated. Once `Join()` returns, the main thread has definitive confirmation that the background operation is finished and can safely continue with dependent processing, cleanup, or application shutdown logic. This directly satisfies the requirement to wait for completion while ensuring that the main thread is informed of that completion through the return of the join operation. The framework also provides timed overloads when the caller must avoid waiting indefinitely, but the parameterless form is appropriate when completion must be awaited. In a Windows Forms application, a blocking join should be used carefully because calling it on the user-interface thread can prevent the interface from processing messages while the worker completes. Nevertheless, for the stated thread-lifecycle synchronization requirement, joining is the relevant mechanism. Microsoft documents that `Join` blocks the calling thread until the represented thread terminates: [Thread.Join Method](#). Related lifecycle behavior for managed threads is described in [Foreground and Background Threads](#).

QUESTION NO: 14

Which of the following statements about Password-based Call Restriction Service is CORRECT?

- A. The default service password is 123456.
- B. All users dial the call restriction prefix, enter the password and place a call.
- C. Users with this service enabled should dial the call restriction prefix, enter the password before placing any call.
- D. Users without this service cannot place any call.

ANSWER: A

Explanation:

The default service password is 123456. Password-based Call Restriction Service uses a service-level password as an access-control mechanism for restricted calling functions. In its initial configuration, the documented default password is 123456, which is the value an authorized administrator would recognize when configuring or testing the service before applying an organization-specific replacement. Default credentials are intended only for initial setup and must be changed promptly as part of secure deployment. Retaining a published default password would allow anyone who knows the product defaults to attempt use of restricted calling capabilities, undermining the purpose of call controls and potentially exposing the organization to unauthorized toll charges or fraud. A secure implementation should replace the default with a unique, sufficiently strong value, limit knowledge of that value to authorized personnel, and apply the system's available call-permission and logging controls. Huawei's enterprise documentation resources provide product configuration and service guidance at [Huawei Enterprise Support Documentation](#). The importance of eliminating vendor-supplied default credentials and using properly managed authenticators is also consistent with [NIST SP 800-63B: Digital Identity Guidelines](#).

QUESTION NO: 15

You work as a Software Developer for ABC Inc. You create a Console application to create multiple satellite assemblies. Which of the following statements about *satellite assemblies* are true?

Each correct answer represents a complete solution. Choose all that apply.

- A. They do not contain any executable code.
- B. They are used to deploy culture-specific resources for an application.
- C. The Assembly Linker tool is used to compile .resources files into satellite assemblies.
- D. An application can have only one satellite assembly.

ANSWER: A B C

Explanation:

Satellite assemblies are resource-only assemblies that support .NET application localization. They normally contain compiled resources, such as localized strings, images, and other culture-specific user-interface content, rather than the application's executable implementation. The application's main assembly contains the code and the default resources, while satellite assemblies provide alternative resources for individual cultures. At runtime, the .NET resource manager selects the satellite assembly that best matches the current user-interface culture, allowing one application binary to present localized content without deploying separate codebases.

Because satellite assemblies are intended for localization, they are used to deploy culture-specific resources; "language-specific" is commonly used informally, although culture is the more precise .NET term because it can include regional distinctions. Resource files are first converted to binary `.resources` files, and the Assembly Linker (`al.exe`) can then package those resource files into a satellite assembly. A separate satellite assembly can be built for each supported culture and placed in its corresponding culture-named directory. See [Microsoft's guidance for creating satellite assemblies](#) and [Microsoft's resource packaging and deployment documentation](#).

QUESTION NO: 16

Which of the following statements is INCORRECT about the mode for setting the eSpace 7950 IP phone IP address?

- A. On the IP phone LCD login screen, press the Network softkey and choose IPV4 Setting.
- B. On the IP phone LCD home screen, choose Apps > Advanced > Network > IPv4 Setting.
- C. When you obtain the current IP address of the IP phone, you can use the administrator account to log in to the web page to change the IP address.
- D. If the IP phone fails to be registered, you can change the IP address only on the IP phone LCD screen.

ANSWER: D

Explanation:

The statement *"If the IP phone fails to be registered, you can change the IP address only on the IP phone LCD screen."* is incorrect because SIP registration status does not by itself determine whether the phone's web-based management interface can be used. Registration is the phone's ability to authenticate and connect to its configured call-control service, while access to the web interface depends on ordinary network connectivity to the phone's current management IP address and the availability of valid administrator credentials. Thus, a phone that has not registered can still be reachable on the local network and can be administered through a browser by using its current IP address. The LCD interface is a valid local method for viewing or changing IPv4 settings, especially when remote access is unavailable, but it is not the only available method merely because registration has failed. This distinction is important during troubleshooting: administrators can adjust addressing, VLAN-related connectivity, or other network parameters through the management page before attempting registration again. Huawei's enterprise support portal provides product documentation and support resources for the eSpace phone family: [Huawei Enterprise Support](#). General IP configuration and management concepts are also described in the Internet protocol specifications maintained by the IETF: [RFC 791](#).

QUESTION NO: 17

Which of the following statements is CORRECT about deploying an IP phone in a voice VLAN?

- A. The phone and attached PC must always use the same VLAN.
- B. Voice traffic can use the voice VLAN while PC traffic uses the data VLAN.
- C. A phone in a voice VLAN cannot receive Power over Ethernet.
- D. The PC port must be connected directly to the access switch.

ANSWER: B

Explanation:

The IP phone can place its voice traffic in the configured **voice VLAN** while a PC connected through the phone's PC port uses the data VLAN. This design separates voice and data traffic logically on the switch-facing link and allows the network to apply voice-specific quality-of-service, security, and addressing policies. The switch port must be configured to support the applicable data and voice VLAN behavior. The phone does not require a separate physical Ethernet uplink when its integrated PC port is used.

QUESTION NO: 18

Which of the following statements are CORRECT about the PRA protocol? (Multiple Choice)

- A. The protocol consists of the physical layer, data link layer, and network layer.
- B. The protocol is used for link multiplexing and error detection at the physical layer.
- C. The standard protocol used at the data link layer is Q.921.
- D. The standard protocol used at the network layer is Q.931.

ANSWER: A C D

Explanation:

Primary Rate Access (PRA), also called Primary Rate Interface (PRI), is an ISDN access arrangement structured across the lower three OSI layers. Its physical-layer specification defines the electrical interface and bearer-channel structure for the primary-rate connection. Above that interface, ISDN uses a separate D channel for signalling. This layered design is why the statement that PRA consists of physical, data-link, and network layers is correct in the context of ISDN access and call control.

At the data-link layer, Q.921 specifies LAPD (Link Access Procedure on the D channel). LAPD provides reliable signalling-frame transfer over the D channel, including framing, addressing, sequencing, and error-control functions needed by ISDN signalling endpoints. At the network layer, Q.931 defines ISDN user-network call-control signalling, including procedures and message formats for establishing, maintaining, and clearing calls. Therefore, Q.921 is the applicable data-link-layer standard and Q.931 is the applicable network-layer call-control standard for PRA signalling. The relevant normative specifications are available from the [ITU-T Q.921 recommendation](#) and the [ITU-T Q.931 recommendation](#).

QUESTION NO: 19

Add a prefix on the U1960. Set the prefix attributes as follows:

Prefix: 9

Call property: local call

Called number change: None

Calling number change: 1

Display long calling number: Yes

Which of the following statements are CORRECT? (Assume that no additional configurations are required except for the necessary configurations and a trunk has been correctly connected to the peer office.)

(Multiple Choice)

- A. Assume that the number 7000 is an intra-office number short for 05717000. When we use this phone number to call an outer-office user, the calling number displayed on his or her phone is 7000.
- B. Assume that the number 7000 is an intra-office number short for 05717000. When we use this phone number to call an outer-office user, the calling number displayed on his or her phone is 7000.
- C. Assume that the number 7000 is an intra-office number short for 05717000. When we use this phone number to call an outer-office user, the calling number displayed on his or her phone is 05717000.

D. Assume that the number 7000 is an intra-office number short for 05717000. In normal cases, we can use this phone number to call an outer-office user whose number is 8000.

ANSWER: C D

Explanation:

The statement that the outer-office user sees *05717000* is correct because the prefix configuration explicitly enables *Display long calling number*. The intra-office extension is 7000, while 05717000 is its associated long number; therefore, outbound presentation uses the long calling number rather than the abbreviated intra-office number. The configured calling-number handling supports presentation appropriate for the peer-office call, and the long-number display setting determines that the long form is sent for caller identification.

The statement that extension 7000 can call an outer-office number 8000 in normal circumstances is also correct. Prefix 9 is configured as a local-call access prefix, so a user can place a local peer-office call by using that prefix together with the destination number (for example, dialing 98000). Because the called-number change is set to *None*, the destination number remains 8000 when the call is routed over the correctly connected trunk. This behavior is consistent with prefix-based outbound routing: the prefix selects the route and call property, while the destination digits are preserved for delivery to the peer office.

For product documentation and support resources relevant to U1960 configuration, consult [Huawei Enterprise Support](#). For the certification context, see [GIAC Secure Software Programmer – .NET](#).

QUESTION NO: 20

How many timeslots are available for calls in PRA signaling?

- A. 32
- B. 31
- C. 30
- D. 29

ANSWER: C

Explanation:

30 is correct for the E1-based ISDN Primary Rate Access (PRA), commonly called PRI. An E1 bearer is structured as 32 timeslots, each carrying 64 kbps. Timeslot 0 is reserved for framing, synchronization, and related maintenance functions. Timeslot 16 is used as the D channel, which carries ISDN signaling information such as call setup, supervision, and teardown. The remaining 30 timeslots are B channels and are available to carry user traffic, including voice calls or data. Consequently, this interface can support up to 30 simultaneous bearer calls when each call occupies one B channel. This channel allocation is the standard E1 PRI arrangement used broadly outside North America and Japan. It is important to distinguish the available bearer channels from the total physical E1 timeslots: the total is 32, but only 30 are available for calls because framing and signaling each require a dedicated timeslot. The ISDN primary-rate physical-layer specification is defined in [ITU-T Recommendation I.431](#); a practical overview of E1 PRI channel structure is also available in [Cisco's PRI documentation](#).

QUESTION NO: 21

On U1900 series unified gateways, which of the following outgoing call rights are available for users of the default level? (Multiple Choice)

- A. Intra-office call
- B. Local call
- C. National toll call

D. International toll call

ANSWER: A B

Explanation:

Users assigned the default level on a U1900-series unified gateway have the outgoing-call rights needed for ordinary internal and local communications: **Intra-office call** and **Local call**. Intra-office calling permits extension-to-extension dialing within the organization's voice system, supporting routine communication among internal users. Local calling permits dialing numbers within the configured local calling area, which covers the normal external dialing requirement for a basic user profile. These rights reflect a least-privilege telephony configuration: the default user level supports everyday business calling without granting elevated long-distance or international authorization. Administrators can assign higher user levels or adjust the applicable call-rights settings when a user's role requires broader dialing privileges. This approach is consistent with the general secure-administration principle of assigning only the access necessary for the user's expected work. Huawei enterprise support documentation provides product documentation and configuration resources for unified-communications gateways at [Huawei Enterprise Support](#). For broader context on Huawei unified-communications products and enterprise voice deployment, see [Huawei Enterprise Communications](#).

QUESTION NO: 22

Which of the following statements about IAD196 functions and features are CORRECT? (Multiple Choice)

- A. One IAD196 supports 196 POTS users at most.
- B. One IAD196 provides 1 main control board slot and 3 interface board slots.
- C. It supports local switch.
- D. When configured with ASI board, it is capable of power-off survival.

ANSWER: B C

Explanation:

"One IAD196 provides 1 main control board slot and 3 interface board slots." is correct because the IAD196 uses a modular chassis design. Its control-board position hosts the system's centralized management and control functions, while its three interface-board positions provide the physical capacity for deploying supported subscriber or service interfaces. This slot arrangement is a fundamental hardware characteristic used when planning an IAD196 installation and selecting compatible service boards.

"It supports local switch." is also correct. Local switching allows calls between subscribers served by the same IAD to be switched locally rather than requiring all such traffic to traverse the upstream IP or voice network. This capability can reduce upstream bandwidth use and supports continued handling of locally switched subscriber calls according to the configured voice-service and dial-plan settings. In access-network deployments, local switching is an important feature for efficient delivery of POTS-based voice services from an integrated access device. Huawei's enterprise support portal and access-network product resources provide product documentation and deployment materials for these platforms: [Huawei Enterprise Support](#) and [Huawei Access Network Products](#).

QUESTION NO: 23

The authentication modes used during SIP number allocation on the U1900 series gateway include (). (Multiple Choice)

- A. No authentication
- B. by IP
- C. by password
- D. by IP and password
- E. byLDAP

ANSWER: A B C D

Explanation:

The valid authentication modes for SIP number allocation are *No authentication*, *by IP*, *by password*, and *by IP and password*. These choices represent the common access-control models available when associating SIP users or numbers with gateway-side registration and calling permissions. No-authentication operation permits allocation without validating a supplied identity credential. IP-based authentication identifies or permits the endpoint according to its configured source IP address. Password-based authentication uses a configured password credential, consistent with SIP's challenge/response authentication model. Combined IP-and-password authentication applies both the network-location and credential checks, providing a stronger restriction than either method alone. SIP itself defines digest authentication mechanisms for protecting requests and verifying user credentials; gateway implementations can additionally use source-address controls as part of their provisioning and access policy. See the SIP specification's authentication requirements in [RFC 3261](#), especially its security and authentication sections. Huawei's enterprise support portal provides the product documentation and configuration references for U1900-series voice gateways at [Huawei Enterprise Support](#).

QUESTION NO: 24

Which of the following statements are CORRECT about R2 signaling? (Multiple Choice)

- A. R2 signaling is a common channel signaling (CCS).
- B. R2 signaling consists of line signaling and inter-register signaling.
- C. Register signaling in R2 signaling is inband signaling.
- D. Line signaling in R2 signaling is used to transmit information such as numbers, user types, and billing.

ANSWER: B C

Explanation:

R2 signaling consists of line signaling and inter-register signaling. This is the fundamental structure of the R2 (also called MFC-R2) telephone signaling system used on digital trunk circuits. Line signaling manages the circuit's supervisory state—for example, seizure, acknowledgment, answer, clear-forward, and release conditions—so that the exchanges can establish and clear a call correctly. Inter-register signaling is the separate phase used for exchanging call-control and address information after a circuit is seized.

Register signaling in R2 signaling is inband signaling. Specifically, R2 inter-register signaling uses multifrequency (MF) tone combinations transmitted in the voice-frequency band of the individual speech channel. It commonly uses a compelled sequence: the originating side sends a forward MF signal, the terminating side returns a backward MF signal, and the next item is sent only after the appropriate acknowledgment. This mechanism supports exchange of dialed digits and other routing or subscriber-related information during call setup. These characteristics distinguish the supervisory line-signaling function from the inband MF register-signaling function. See the ITU-T MFC-R2 specification materials at [ITU-T Recommendation Q.441](#) and the overview of signaling systems in [ITU-T Recommendation Q.400](#).

QUESTION NO: 25

John works as a Web Developer for Bitsoft Inc. He creates an ASP.NET application, named MyApp1, by using Visual Studio .Net for a University Web site. Students will use MyApp1 to view their term end result. MyApp1 contains an ASP.NET page named, named Page1. Page1 contains a *TextBox* control, named txtEnrolmentNo, and two *Button* controls, named btnSubmit and btnCancel respectively.

John wants that if a user tries to submit the page by clicking the Submit button without entering his enrolment the word "Required" appears next to txtEnrolmentNo. However, when a user clicks the Cancel button he is redirected to a new page, named PageCancel.aspx. To accomplish this he adds a *RequiredFieldValidator* control to the page and sets its *ControlToValidate* and *ErrorMessage* properties to txtEnrolmentNo and "Required" respectively. However, when he executes the application he finds that the validation check is also performed on clicking the Cancel button. What is the most likely cause of the issue?

- A. The CauseValidation property of btnSubmit is not set to True.

- B. The CauseValidation property of btnCancel is not set to True.
- C. The CauseValidation property of btnSubmit is not set to False.
- D. The CauseValidation property of btnCancel is not set to False.

ANSWER: D

Explanation:

The CauseValidation property of btnCancel is not set to False. In ASP.NET Web Forms, the property's actual name is CausesValidation, and it controls whether clicking a button initiates validation for the page's validator controls. A Button has CausesValidation set to true by default. Consequently, both the submit action and the cancel action trigger the RequiredFieldValidator unless the cancel button is explicitly configured not to cause validation.

A cancel action is normally a navigation or abandonment action, not a submission requiring valid form input. Setting btnCancel.CausesValidation = false, or declaring CausesValidation="False" in the ASP.NET markup, prevents validation from running when the user clicks Cancel. The click handler can then redirect to PageCancel.aspx regardless of whether txtEnrolmentNo contains a value. The submit button can retain its default validation behavior, so the RequiredFieldValidator displays "Required" when an enrolment number has not been entered. Microsoft documents this behavior for the Button.CausesValidation property at [Microsoft Learn](#) and describes ASP.NET validation controls at [Microsoft Learn](#).

QUESTION NO: 26

You work as a Software Developer for InfoTech Inc. You develop an application named MyApp that works as a scientific calculator. A user inputs data and retrieves the calculated results based on the input values. The application uses a SQL database that contains two tables. One table contains data related to standard calculation specifications and the other table stores input values entered by the user. You want to ensure that the user is able to retrieve appropriate data fast. Which of the following actions will you take to accomplish the task?

Each correct answer represents a part of the solution. Choose all that apply.

- A. Use more than one component to process input data.
- B. Write code that performs multiple tasks simultaneously.
- C. Run multiple processes on a single thread.
- D. Use a single component to process input data.
- E. Run multiple processes on separate threads.

ANSWER: B D E

Explanation:

"Write code that performs multiple tasks simultaneously," "Use a single component to process input data," and "Run multiple processes on separate threads" support responsive and efficient processing when the calculator must accept input, perform calculations, and retrieve related SQL data. Separating independent work onto separate threads allows the application to avoid unnecessarily blocking one activity while another activity is waiting for database I/O or completing computation. In modern .NET code, this is commonly implemented with asynchronous operations and task-based concurrency, which improves responsiveness and throughput when used for independent operations. Microsoft describes the Task Parallel Library as supporting productive parallel and concurrent programming, while the async programming model enables applications to remain responsive during potentially lengthy I/O-bound work. A single component responsible for processing the input also provides a focused processing path and avoids unnecessary coordination overhead between multiple input-processing components. The component can validate the submitted values, invoke the required calculation and data-access operations, and return the appropriate result through a controlled workflow. These techniques should be paired with sound SQL design, including appropriate indexes and parameterized queries, so that the database can locate requested rows efficiently and safely. See [Microsoft's Task Parallel Library documentation](#) and [Microsoft's asynchronous programming guidance](#).

QUESTION NO: 27

You work as a Software Developer for ABC Inc. The company uses Visual Studio .NET 2008 as its application development platform. You create an ASP.NET Web application using .NET Framework 3.5. You need to represent a strongly typed lambda expression as a data structure in the form of an expression tree. Which of the following classes will you use to accomplish the task?

- A. MethodCallExpression
- B. Expression
- C. Expression
- D. LambdaExpression

ANSWER: B

Explanation:

`Expression<TDelegate>` is the appropriate class because it represents a lambda expression as a strongly typed expression tree. The generic type parameter identifies the delegate signature that the lambda expression implements, preserving compile-time type information for its parameters and return value. For example, an expression such as `Expression<Func<int, bool>> predicate = value => value > 10;` stores a structured, inspectable representation of that lambda rather than merely storing executable code. Its tree can be examined, traversed, or translated by frameworks that need to interpret the expression, such as LINQ providers translating a predicate into another query language. This capability is especially important when application logic must be analyzed dynamically instead of simply invoked. The .NET expression-tree model was introduced with LINQ in .NET Framework 3.5, and the generic expression type provides the strongly typed form of a lambda expression. Microsoft documents that lambda expressions assigned to `Expression<TDelegate>` are compiled into expression trees, and its API reference identifies the class as the strongly typed expression-tree representation of a lambda expression. See [Microsoft's expression tree overview](#) and the [Expression<TDelegate> API reference](#).

QUESTION NO: 28

You work as a .NET Trainer for ABC Inc. The Company uses .NET Framework as its application development platform. You are creating an application to demonstrate the use of datatypes. You create an unsigned Short datatype in the application. Which of the following values can be assigned to the unsigned Short datatype?

Each correct answer represents a complete solution. Choose three.

- A. 123
- B. 65,535
- C. 127,625
- D. 32,636
- E. -123

ANSWER: A B D

Explanation:

In C#, an unsigned short is represented by the `ushort` keyword, which is an alias for `System.UInt16`. This integral type stores whole-number values only and uses 16 bits without a sign bit. Consequently, its supported range begins at zero and extends through 65,535, inclusive. The values 123, 65,535, and 32,636 are all nonnegative whole numbers within that supported range, so each can be held in an unsigned short. In source code, a comma is not part of a numeric literal; the displayed comma in values such as 65,535 is understood as a thousands separator in the question. The corresponding C# literal would be written as 65535, potentially with a `ushort` suffix or an explicit cast where required by the assignment context. Using `ushort` is appropriate when an application needs a compact 16-bit integer and its domain is known not to

require negative values. Microsoft documents that `ushort/System.UInt16` has a minimum value of 0 and a maximum value of 65,535. See [C# integral numeric types](#) and [System.UInt16 documentation](#).

QUESTION NO: 29

In adding POTS numbers, the `startuserno` parameter specifies the ().

- A. Start number
- B. Start port number
- C. Start long number
- D. Start user number

ANSWER: D

Explanation:

Start user number is correct because the parameter name `startuserno` conventionally expands to “start user number.” In a bulk or range-based POTS-number addition operation, this value identifies the first user or subscriber number in the sequence to be created. The system uses that starting user-number value as the anchor for allocating the requested POTS entries, typically incrementing through subsequent numbers according to the range or quantity supplied elsewhere in the operation. This distinguishes the logical subscriber/user numbering being provisioned from physical port identifiers, which are normally represented by a separately named port-related parameter. POTS provisioning is fundamentally concerned with associating a subscriber’s telephone number with service and line resources; telephone-number structures are governed by established numbering-plan principles, including those described in [ITU-T Recommendation E.164](#). For context on representing and handling telephone subscriber numbers in systems and applications, see [RFC 3966: The tel URI for Telephone Numbers](#). Thus, `startuserno` specifies the initial user number from which the POTS-number creation sequence begins.

QUESTION NO: 30

You work as a Software Developer for Mansoft Inc. You create an application and use it to create users as members of the local Users group. Which of the following code snippets imperatively demands that the current user is a member of the local Users group?

Each correct answer represents a complete solution. Choose all that apply.

- A. `PrincipalPermission MyPermission = new PrincipalPermission(null, @"BUILTIN\Users", true); MyPermission.Demand();`
- B. `PrincipalPermission MyPermission = new PrincipalPermission(null, @"BUILTIN\Users", true); MyPermission.Demand();`
- C. `PrincipalPermission MyPermission = new PrincipalPermission(null, @"Users", true);`
- D. `MyPermission.Demand();`

ANSWER: A B

Explanation:

`PrincipalPermission MyPermission = new PrincipalPermission(null, @"BUILTIN\Users", true); MyPermission.Demand();` is correct because it creates a `PrincipalPermission` that requires an authenticated principal to be in the Windows built-in local Users group, then explicitly enforces that requirement by calling `Demand()`. Passing `null` as the name means no specific user name is required. The role value `BUILTIN\Users` identifies the built-in local group rather than a potentially ambiguous group name from another authority, and `true` requires that the caller be authenticated. Calling `Demand()` performs the imperative authorization check against the current principal; if the current principal does not satisfy the permission, the demand fails with a security exception. The equivalent corrected snippets are both complete solutions because each includes both construction of the role-based permission and the explicit demand that evaluates it. Microsoft documents that `PrincipalPermission` represents authorization requirements based on identity

and role, while `Demand()` checks whether the current principal satisfies the permission. See [PrincipalPermission documentation](#) and [CodeAccessPermission.Demand documentation](#).

QUESTION NO: 31

You work as a Software Developer for ABC Inc. The company uses Visual Studio.NET 2005 as its application development platform. You are creating a .NET remoting application using .NET Framework

2.0. You want to use a remote object whose lifetime is controlled by a server and the remote object is created for each client request. Which of the following objects will you use to accomplish the task?

- A. Client activated
- B. MarshalByRefObject
- C. Server activated Singleton
- D. Server activated SingleCall

ANSWER: D

Explanation:

Server activated SingleCall is the appropriate remoting activation model when the server must control the remote object's lifetime and a distinct object instance must be created to process each client request. A SingleCall well-known service is activated on demand by the remoting infrastructure: when a method call arrives, the server creates an instance, dispatches that request to it, and then makes the instance eligible for collection after the call completes. This provides strong isolation between requests because no instance state is retained for a subsequent caller or invocation. It is therefore well suited to stateless remote services, where each operation has all required input supplied in the call itself. The server registers the remotable type as a well-known service using the SingleCall activation mode, allowing the server—not an individual client—to determine how instances are activated and managed. This behavior directly meets both requirements in the question: server-controlled lifetime and per-request instance creation. Microsoft's remoting architecture documentation describes server activation and well-known object modes, while the API reference identifies `SingleCall` as the mode that creates a new object for each incoming message. See [WellKnownObjectMode documentation](#) and [.NET remoting overview](#).

QUESTION NO: 32

You work as a Software Developer for ABC Inc. You create a Web page named `MyWebForm1.aspx` that displays a student's registration form. The page uses three `CheckBox` controls and several other Web server controls on the page. The `CheckBox` controls contain information about the educational qualifications. You want to ensure that a message containing educational status and relevant information is displayed as soon as a user clicks the `CheckBox` controls. Which of the following actions will you take to accomplish the task?

Each correct answer represents a part of the solution. Choose two.

- A. Set the `AutoPostBack` property to false.
- B. Use the `CheckedChanged` event.
- C. Set the `CausesValidation` property to false.
- D. Set the `CausesValidation` property to true.
- E. Set the `Checked` property to true.
- F. Set the `AutoPostBack` property to true.

ANSWER: B F

Explanation:

Use the `CheckedChanged` event and set the `AutoPostBack` property to `true`. In ASP.NET Web Forms, a `CheckBox` is a server control, so server-side code that updates a message or other server controls runs only after the page posts back to the server. Setting `AutoPostBack` to `true` causes the `CheckBox` to submit the form immediately when its checked state is changed, rather than waiting for the user to submit the form through another control. This supplies the required immediate interaction for a server-rendered Web Forms page.

The `CheckedChanged` event is the corresponding server-side event handler for a change in the `CheckBox`'s `Checked` value. Code in that handler can determine the educational qualification selected and set the message text, visibility, or related registration fields before ASP.NET renders the response back to the browser. Together, automatic postback and the change event provide the necessary trigger and processing location for displaying the educational-status information as soon as the user changes a `CheckBox`. Microsoft documents `AutoPostBack` for `CheckBox` controls at [CheckBox.AutoPostBack Property](#) and the event behavior at [CheckBox.CheckedChanged Event](#).

QUESTION NO: 33

An MTU board in U1960 supports () E1 ports at most.

- A. 1
- B. 2
- C. 3
- D. 4

ANSWER: D

Explanation:

The correct answer is **4**. In the Huawei U1960 equipment configuration, the MTU board provides transmission-interface capacity for a maximum of four E1 ports. An E1 is a standard 2.048-Mbit/s digital transmission interface commonly used to carry TDM traffic, synchronization, or backhaul connectivity in cellular access-network deployments. The question asks for the board's maximum supported E1-port count, so the relevant value is the physical/interface capacity of the MTU board rather than the capacity of an entire cabinet, subrack, or site configuration. Therefore, selecting 4 correctly states the maximum number of E1 interfaces available through this specific board. Huawei's enterprise support portal provides product documentation and technical-reference materials for legacy wireless products, including U-series equipment: [Huawei Enterprise Support](#). For the underlying E1 transmission standard and its 2.048-Mbit/s framing context, see the ITU-T G.703 recommendation: [ITU-T Recommendation G.703](#).

QUESTION NO: 34

Henry works as a Software Developer for InfoTech Inc. He develops a Web application for registered employees of the company. The application requires accessing several XML data stored in a database named Database1. However, Henry wants to ensure that the XML data is validated before being accessed. Which of the following classes will Henry use to validate the XML data?

- A. `XmlValidatingReader`
- B. `XmlTextReader`
- C. `XmlNodeReader`
- D. `XmlReader`

ANSWER: A

Explanation:

`XmlValidatingReader` is the class designed in the classic .NET XML API to validate XML while it is being read. It wraps another XML reader and can apply validation according to a DTD, an XML Schema definition (XSD), or other configured

validation behavior. As the application consumes XML nodes, the reader checks whether the document conforms to the selected validation rules, allowing invalid XML to be detected before the application relies on its contents. This makes it suitable for the stated requirement that XML data be validated as it is accessed.

In current .NET development, `XmlValidatingReader` is obsolete. The supported approach is to create an `XmlReader` with `XmlReaderSettings`, enable `ValidationType.Schema` or another applicable validation type, and provide schemas through the settings. Nevertheless, when the question specifically asks for the legacy class whose direct purpose is XML validation, `XmlValidatingReader` is the intended answer. Microsoft's API documentation identifies this type as the validating reader and notes its obsolete status: [XmlValidatingReader documentation](#). The modern configuration model is documented at [XmlReaderSettings.ValidationType](#).

QUESTION NO: 35

For the U1900, which of the following statements is CORRECT about the prefix?

- A. The basic service prefixes can be classified into two types: intra-office prefix and outgoing prefix.
- B. An intra-office prefix is the one used for calls between extensions within the same enterprise.
- C. Since prefix 28 contains prefix 289, the system regards 28 as the prefix in the called number 28901111 when it analyzes the called number based on the maximum matching rule.
- D. A prefix must map an office route selection code.

ANSWER: A

Explanation:

The basic service prefixes can be classified into two types: intra-office prefix and outgoing prefix. This correctly describes the U1900 dial-plan model at the basic-service level. A prefix is a leading digit pattern that the system evaluates during digit analysis so it can identify the intended call treatment and apply the associated routing or service logic. The intra-office category supports internal enterprise dialing, while the outgoing category is used when dialing requires treatment as an external call. Separating these categories lets administrators implement a consistent enterprise numbering plan while controlling how calls are recognized before subsequent routing analysis occurs.

This classification is significant because prefix configuration is foundational to call processing: users dial a number, the U1900 analyzes the leading digits against configured prefixes, and the call is then handled according to the matched service context. Administrators should verify the exact available fields and matching behavior in the documentation for the deployed U1900 software release, since management interfaces and configuration details may vary by version. Huawei's enterprise support portal provides product documentation and version-specific technical resources at [Huawei Enterprise Support](#). For general numbering-plan terminology and the role of leading digits in identifying number ranges, see the ITU-T E.164 recommendation at [ITU-T E.164](#).

QUESTION NO: 36

An E1 PRA trunk has intermittent call failures even though the physical link is connected. Which of the following items should be checked during troubleshooting? (Multiple Choice)

- A. Check physical cabling and connector status.
- B. Check the configured framing and line coding.
- C. Check the clock-source settings.
- D. Increase the user call-right level.

ANSWER: A B C

Explanation:

Physical cabling and connector status, the configured framing and line coding, and clock-source settings should be checked. A damaged cable or poor connector can introduce errors even when a link indication is present. Framing or line-coding mismatches prevent the two ends from interpreting E1 frames consistently. Clocking problems can cause slips or synchronization loss that disrupt signaling and bearer channels.

User call rights affect whether an extension is permitted to place a call, but they do not correct E1 transmission or synchronization faults. The E1 framing requirements are described in [ITU-T Recommendation G.704](#).

QUESTION NO: 37

In U1900 serials unified gateway, which of the following approaches can be used for modifying called numbers for outgoing calls?

- A. Number change
- B. Long and short number
- C. Number mapping
- D. None of the above

ANSWER: A

Explanation:

Number change is the appropriate approach for modifying the called number on an outgoing call in this context. Outgoing-call number change is a dial-plan manipulation function: after a user dials a destination number and the gateway selects the relevant outbound route, the gateway can apply configured number-change rules before sending the call to the carrier, trunk, or downstream PBX. This supports practical interoperability requirements such as adding or removing an access prefix, changing a leading digit sequence, or converting an internally dialed form into the number format required by the destination network. The operation applies specifically to the called party number, so it directly addresses how an outbound destination is rewritten. Correct configuration must preserve a valid, routable destination number and align with the numbering plan used by the receiving network. This is consistent with the general E.164 principle that public telephone numbers are structured and interpreted according to the applicable numbering plan; see the [ITU-T E.164 recommendation](#). Huawei product documentation and support resources for enterprise voice gateways are available through the [Huawei Enterprise Support portal](#).

QUESTION NO: 38

You work as a Software Developer for ABC Inc. You create a SQL server database named DATA1 that will manage the payroll system of the company. DATA1 contains two tables named EmployeeData and Department. While EmployeeData records detailed information of the employees, Department stores information about the available departments in the company. EmployeeData consists of columns that include EmpID, EmpName, DtOB, DtJoin, DeptNo, Desig, BasicSal, etc. You want to ensure that each employee ID is unique and is not shared between two or more employees. You also want to ensure that the employees enter only valid department numbers in the DeptNo column. Which of the following actions will you perform to accomplish the task?

Each correct answer represents a part of the solution. Choose all that apply.

- A. Define views in the database.
- B. Add constraints to the EmployeeData table.
- C. Define triggers in the EmployeeData table.
- D. Define a unique index on the EmpID column in the EmployeeData table.
- E. Add stored procedures by using Transact-SQL queries.

ANSWER: B D

Explanation:

Adding constraints to the EmployeeData table is the primary declarative-integrity mechanism for this requirement. EmpID should be defined with a PRIMARY KEY or UNIQUE constraint so that SQL Server rejects attempts to insert or update a row that would duplicate an existing employee identifier. DeptNo should be defined as a FOREIGN KEY that references the department-number key in the Department table. This makes the relationship explicit and ensures that every non-null department number recorded for an employee corresponds to an existing department row. SQL Server enforces these rules regardless of which application, query tool, or account performs the data modification, making the protection reliable at the database boundary. Microsoft documents that primary-key and unique constraints enforce uniqueness, while foreign-key constraints preserve referential integrity between related tables. See [Primary and foreign key constraints](#).

Defining a unique index on EmpID is also a valid way to enforce the required uniqueness at the SQL Server storage-engine level. A unique index prevents duplicate key values and is therefore suitable when uniqueness must be guaranteed for EmpID. In practice, a PRIMARY KEY or UNIQUE constraint is generally preferred when the rule is part of the table's logical schema; SQL Server implements such constraints using a unique index. The behavior and use of unique indexes are described in [Create unique indexes](#).

QUESTION NO: 39

Which of the following controls should be applied when an enterprise enables remote administration of a unified gateway or CDRServer? (Multiple Choice)

- A. Use HTTPS with valid certificate validation.
- B. Use individual administrator accounts with role-based permissions.
- C. Protect configuration backups from unauthorized access.
- D. Enable audit logging for administrative changes.
- E. Use Telnet for remote administration.

ANSWER: A B C D

Explanation:

HTTPS with valid certificate validation protects browser-based administrative sessions from interception and modification. **Individual administrator accounts with role-based permissions** provide accountability and limit access to only the required administrative functions. **Protected configuration backups** are important because backups can contain device addresses, user settings, credentials, and routing information. **Audit logging of administrative changes** supports incident investigation and change control.

Telnet transmits administrative traffic in clear text and should not be used for remote management when secure alternatives are available. Huawei product documentation and secure-management guidance for the installed release should be obtained from the [Huawei Enterprise Support portal](#). TLS security properties are defined in [RFC 8446](#).

QUESTION NO: 40

You work as a Software Developer for ABC Inc. The company uses Visual Studio.NET 2005 as its application development platform. You have recently finished development of Web services using the .NET Framework. The access control to Web services is part of your accountability. You are currently revealing an existing class as a XML Web service. You are required to ensure that the XML Web service is exclusively accessible to Web service clients within the ABC Inc. domain. To fulfill this requirement you want to change the access modifiers on methods that must be represented as Web methods. What will you do to accomplish this task?

- A. Use the Public access modifier for each Web method.
- B. Use the Private access modifier for each Web method.
- C. Use the Internal or Friend access modifier for each Web method.
- D. Use the Protected access modifier for each Web method.

ANSWER: A

Explanation:

Use the Public access modifier for each Web method. In the ASP.NET XML Web Services (ASMX) programming model used with the .NET Framework, a method exposed as a Web service operation must be public. The Web service runtime discovers and invokes public methods marked with `WebMethodAttribute`; this allows the operation to be described in the service metadata and called remotely by a properly formed SOAP request. The public modifier is therefore an exposure requirement for an ASMX Web method, rather than a mechanism for granting unrestricted application access.

Importantly, making a method public does not itself satisfy the business security requirement that only clients from the organization's domain may invoke the service. That restriction must be enforced separately through the hosting environment and application security configuration, such as IIS authentication, Windows or domain authentication, authorization rules, certificates, network restrictions, and appropriate service-level authorization checks. Access modifiers control whether the ASMX framework can expose a method as an endpoint; authentication and authorization determine which authenticated callers can use that endpoint. Microsoft's [WebMethodAttribute documentation](#) describes the attribute used to expose Web service methods, and its [ASP.NET XML Web Services guidance](#) covers creating XML Web service methods.

QUESTION NO: 41

Mark works as a Software Developer for BlueWell Inc. He develops four Windows-based applications using Visual Studio .NET. All the applications use an *assembly*, named Assembly1. Mark deploys the applications on the company's intranet. Later, he modifies Assembly1 and wants to ensure that all the applications use the latest version of Assembly1. Which of the following files will Mark use to accomplish this?

- A. Publisher policy configuration file
- B. Security configuration file
- C. Machine configuration file
- D. Application configuration file

ANSWER: A

Explanation:

Publisher policy configuration file is correct because publisher policy lets the publisher of a shared, strongly named assembly redirect applications to a newer compatible assembly version without editing and redeploying each application's individual configuration file. The policy is distributed as a policy assembly, normally installed in the Global Assembly Cache, and includes a configuration file that specifies an assembly-binding redirect from one version or version range to the replacement version. When each Windows application starts and requests Assembly1, the .NET assembly-binding process can apply that publisher policy and load the updated version consistently across the intranet deployment.

This approach is intended for a publisher who has determined that the newer release is compatible with applications built against the prior release. It centralizes the version redirection decision at the shared assembly publisher level, which is exactly the requirement when several independently deployed applications must move to the latest Assembly1 version. Microsoft documents publisher policy as a mechanism for directing applications to use a new version of a shared component and notes that it applies to strongly named assemblies. See [Redirect assembly versions](#) and [How to create a publisher policy](#).

QUESTION NO: 42

Which of the following statements are CORRECT? (Multiple Choice)

- A. The AT0 trunk is often used to implement DDI features.
- B. The SS7 trunk can be an ISUP trunk or a TUP trunk.
- C. The PRA can be configured at the user side or at the network side.

D. SIP is a transport-layer control (signaling) protocol.

ANSWER: A B C

Explanation:

The AT0 trunk is often used to implement DDI features, the SS7 trunk can be an ISUP trunk or a TUP trunk, and the PRA can be configured at the user side or at the network side are correct statements describing common telephony interfaces and signaling arrangements. Direct Dialing Inward functionality lets an external caller reach an internal extension directly through the public-network connection, and AT0-style analog trunk interfaces have been used in PBX deployments supporting this capability. Signaling System No. 7 provides a common-channel signaling framework; its telephone-user-part functions include both the Telephone User Part (TUP) and the more broadly deployed ISDN User Part (ISUP), which carry call-control information for circuit-switched calls. Primary Rate Access is an ISDN primary-rate interface, and its endpoint role must be configured consistently: customer-premises equipment normally operates as the user/terminal side, while the service-provider or PBX side may operate as the network side. This role distinction governs signaling behavior on the PRI link and is central to successful interoperation. See the ITU overview of [SS7 signaling architecture](#) and the ITU specification for [ISDN user-network interface signaling](#).

QUESTION NO: 43

() is not the method to locate the common fault in IFT system?

- A. Checking Alarm
- B. Log Analysis
- C. Signaling Tracking
- D. Replacing Board

ANSWER: D

Explanation:

Replacing Board is not a method for locating a common fault because it is a corrective hardware action performed after diagnostic work identifies a likely failed component. Fault location should be evidence-driven: operational teams first collect indicators from alarms, event records, logs, and signaling or transaction traces, then correlate the timing and scope of those indicators to isolate the affected service, path, device, or component. This approach preserves evidence, reduces unnecessary service disruption, and avoids replacing functioning hardware based on assumptions. Hardware replacement can be an appropriate remediation or confirmation step once analysis has narrowed the fault to a board, but the act of replacing it does not itself provide a structured means of finding the source of a common fault. This distinction is consistent with established troubleshooting practice: identify symptoms, gather information, isolate the cause, and then implement and verify a solution. Cisco's troubleshooting guidance describes systematic collection and interpretation of diagnostic information before corrective action: [Cisco Troubleshooting Methodology](#). Microsoft likewise recommends using logs and monitoring data to investigate and diagnose operational failures: [Azure Monitor Log Analytics overview](#).

QUESTION NO: 44

In U1900 series unified gateway, which of the following statements are CORRECT about the relationships among prefixes, office routes, office route selection codes, and trunks for eSpace U1900? (Multiple Choice)

- A. A prefix can map only one office route selection code.
- B. An office route selection code can map only one prefix.
- C. Office route selection codes and office routes have a one-to-many relationship.
- D. An office route can map the trunks of different types.

ANSWER: A C D

Explanation:

In the U1900 outbound-call routing model, a prefix is analyzed and associated with a single office route selection code. That selection code represents the routing policy used after digit analysis; multiple prefixes can use the same policy, but each individual prefix points to one selection code. An office route selection code can contain multiple office routes, allowing the system to evaluate alternative routes according to the configured route-selection order and availability. This one-to-many structure supports resilient routing, such as using an alternate carrier or gateway route when the preferred route cannot be used. An office route then associates the route with its available trunk resources. The route can include trunks of different types where the U1900 configuration supports them, enabling a consistent routing policy across, for example, different PSTN, IP, or gateway trunk resources. These relationships separate digit analysis, route selection, and physical/logical trunk assignment, which makes dialing plans easier to administer and provides route redundancy. Consult the applicable U1900 release documentation in the [Huawei Enterprise Support documentation portal](#) and Huawei's [enterprise communications product documentation](#) for version-specific configuration details.

QUESTION NO: 45

The U1981 unified gateway provides a web management system to enable maintenance personnel to perform (). (Multiple Choice)

- A. board, user and trunk configuration
- B. device upgrade
- C. signaling tracking
- D. board status and resource management

ANSWER: A B C D

Explanation:

The U1981's browser-based management capability is intended to support the routine operational lifecycle of the gateway, rather than limiting administrators to basic configuration alone. Maintenance personnel use the web interface to configure hardware boards and service-facing entities such as users and trunks, which are core elements of gateway deployment and telephony service provisioning. The same management environment supports software/device upgrade activities, allowing authorized personnel to maintain the gateway's system software and apply released updates through an administrative workflow. It also provides signaling-tracking functionality, which is essential when investigating call setup, interoperability, registration, or routing behavior because it gives operators visibility into signaling exchanged by the gateway. Finally, board status and resource management are operational functions of the web system: administrators need to review board health and availability and monitor or manage the resources used to deliver voice and trunk services. Together, these functions cover configuration, maintenance, troubleshooting, and status/resource administration—the expected scope of a unified-gateway web management system. Huawei's enterprise support portal is the authoritative location for product documentation, software, and maintenance material: [Huawei Enterprise Support](#). Huawei's enterprise communications product information is available through [Huawei Enterprise Communication](#).

QUESTION NO: 46

You work as a Software Developer for ABC Inc. The company uses Visual Studio .NET 2008 as its application development platform. You are creating an ASP.NET Web application using .NET Framework 3.5. The application will be used to share any type of photos on Internet. All the photos should be accessible in various sizes and formats. You need to add a download feature that can be easily maintained. You also need to make sure that only a single version of all photos is stored on a SQL server database. What will you do?

- A. Create an HttpHandler class to determine the request for the photo download. Process the photo according to the given format and size, and after that return the processed photo in the response.
- B. Create an HttpModule class to determine the request for the photo download. Process the photo according to the given format and size, and after that return the processed photo in the response.

C. Create an ActiveX control that converts the photo to the required format and size.

D. Create a user control that converts the photo to the required format and size.

ANSWER: A

Explanation:

Create an `HttpHandler` class to determine the request for the photo download. Process the photo according to the given format and size, and after that return the processed photo in the response. An ASP.NET HTTP handler is specifically intended to receive a request and generate the resource sent in its HTTP response. The handler can use request values, such as an image identifier, desired width and height, or output format, to retrieve the one original image from SQL Server and create the requested derivative dynamically. It can then set an appropriate content type, such as `image/jpeg` or `image/png`, and write the resulting image bytes directly to the response stream.

This approach preserves the requirement for one stored version because resized or reformatted images are generated only when requested rather than persisted as separate database records. It also centralizes download and image-rendering behavior in one reusable endpoint, making validation, authorization, caching headers, and future format changes easier to maintain. ASP.NET maps requests to handlers through its request-processing pipeline, and a custom handler implements the handler contract to produce the response for a particular resource type. See [ASP.NET HTTP Handlers overview](#) and [IHttpHandler documentation](#).