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Comptia CAS-002

CompTIA Advanced Security Practitioner (CASP) Exam

Sections

1. Enterprise Security
2. Risk Management and Incident Response
3. Research and Analysis
4. Integration of Computing, Communications and Business Disciplines
5. Technical Integration of Enterprise Components
6. Mixed Questions

Exam A

QUESTION 1

A security firm is writing a response to an RFP from a customer that is building a new network based software product. The firm's expertise is in penetration testing corporate networks. The RFP explicitly calls for all possible behaviors of the product to be tested, however, it does not specify any particular method to achieve this goal. Which of the following should be used to ensure the security and functionality of the product? (Select TWO).

- A. Code review
- B. Penetration testing
- C. Grey box testing
- D. Code signing
- E. White box testing

Correct Answer: AE

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 2

Company XYZ has purchased and is now deploying a new HTML5 application. The company wants to hire a penetration tester to evaluate the security of the client and server components of the proprietary web application before launch. Which of the following is the penetration tester MOST likely to use while performing black box testing of the security of the company's purchased application? (Select TWO).



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- A. Code review
- B. Sandbox
- C. Local proxy
- D. Fuzzer
- E. Port scanner

Correct Answer: CD

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 3

The Information Security Officer (ISO) believes that the company has been targeted by cybercriminals and it is under a cyber attack. Internal services that are normally available to the public via the Internet are inaccessible, and employees in the office are unable to browse the Internet. The senior security engineer starts by reviewing the bandwidth at the border router, and notices that the incoming bandwidth on the router's external interface is maxed out. The security engineer then inspects the following piece of log to try and determine the reason for the downtime, focusing on the company's external router's IP which is 128.20.176.19:

```
11:16:22.110343 IP 90.237.31.27.19 > 128.20.176.19.19: UDP, length 1400
11:16:22.110351 IP 23.27.112.200.19 > 128.20.176.19.19: UDP, length 1400
11:16:22.110358 IP 192.200.132.213.19 > 128.20.176.19.19: UDP, length 1400
11:16:22.110402 IP 70.192.2.55.19 > 128.20.176.19.19: UDP, length 1400
11:16:22.110406 IP 112.201.7.39.19 > 128.20.176.19.19: UDP, length 1400
```

Which of the following describes the findings the senior security engineer should report to the ISO and the BEST solution for service restoration?

- A. After the senior engineer used a network analyzer to identify an active Fraggle attack, the company's ISP should be contacted and instructed to block the malicious packets.
- B. After the senior engineer used the above IPS logs to detect the ongoing DDOS attack, an IPS filter should be enabled to block the attack and restore communication.
- C. After the senior engineer used a mirror port to capture the ongoing amplification attack, a BGP sinkhole should be configured to drop traffic at the source networks.
- D. After the senior engineer used a packet capture to identify an active Smurf attack, an ACL should be placed on the company's external router to block incoming UDP port 19 traffic.

Correct Answer: A

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 4

An external penetration tester compromised one of the client organization's authentication servers and retrieved the password database. Which of the following methods allows the penetration tester to MOST efficiently use any obtained administrative credentials on the client organization's other systems, without impacting the integrity of any of the systems?

- A. Use the pass the hash technique

- B. Use rainbow tables to crack the passwords
- C. Use the existing access to change the password
- D. Use social engineering to obtain the actual password

Correct Answer: A

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 5

A web services company is planning a one-time high-profile event to be hosted on the corporate website. An outage, due to an attack, would be publicly embarrassing, so Joe, the Chief Executive Officer (CEO), has requested that his security engineers put temporary preventive controls in place. Which of the following would MOST appropriately address Joe's concerns?

- A. Ensure web services hosting the event use TCP cookies and deny_hosts.
- B. Configure an intrusion prevention system that blocks IPs after detecting too many incomplete sessions.
- C. Contract and configure scrubbing services with third-party DDoS mitigation providers.
- D. Purchase additional bandwidth from the company's Internet service provider.

Correct Answer: C

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 6

The Chief Executive Officer (CEO) of an Internet service provider (ISP) has decided to limit the company's contribution to worldwide Distributed Denial of Service (DDoS) attacks. Which of the following should the ISP implement? (Select TWO).

- A. Block traffic from the ISP's networks destined for blacklisted IPs.
- B. Prevent the ISP's customers from querying DNS servers other than those hosted by the ISP.
- C. Scan the ISP's customer networks using an up-to-date vulnerability scanner.
- D. Notify customers when services they run are involved in an attack.
- E. Block traffic with an IP source not allocated to customers from exiting the ISP's network.

Correct Answer: DE

Section: Research and Analysis**Explanation****Explanation/Reference:****QUESTION 7**

Due to compliance regulations, a company requires a yearly penetration test. The Chief Information Security Officer (CISO) has asked that it be done under a black box methodology.

Which of the following would be the advantage of conducting this kind of penetration test?

- A. The risk of unplanned server outages is reduced.
- B. Using documentation provided to them, the pen-test organization can quickly determine areas to focus on.
- C. The results will show an in-depth view of the network and should help pin-point areas of internal weakness.
- D. The results should reflect what attackers may be able to learn about the company.

Correct Answer: D

Section: Research and Analysis**Explanation****Explanation/Reference:****QUESTION 8**

Ann, a systems engineer, is working to identify an unknown node on the corporate network. To begin her investigative work, she runs the following nmap command string:

```
user@hostname:~$ sudo nmap -O 192.168.1.54
```

Based on the output, nmap is unable to identify the OS running on the node, but the following ports are open on the device:

```
TCP/22  
TCP/111  
TCP/512-514  
TCP/2049  
TCP/32778
```

Based on this information, which of the following operating systems is MOST likely running on the unknown node?

- A. Linux

- B. Windows
- C. Solaris
- D. OSX

Correct Answer: C

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 9

A security engineer is responsible for monitoring company applications for known vulnerabilities. Which of the following is a way to stay current on exploits and information security news?

- A. Update company policies and procedures
- B. Subscribe to security mailing lists
- C. Implement security awareness training
- D. Ensure that the organization vulnerability management plan is up-to-date

Correct Answer: B

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 10

The Chief Executive Officer (CEO) of a small start-up company wants to set up offices around the country for the sales staff to generate business. The company needs an effective communication solution to remain in constant contact with each other, while maintaining a secure business environment. A junior-level administrator suggests that the company and the sales staff stay connected via free social media. Which of the following decisions is BEST for the CEO to make?

- A. Social media is an effective solution because it is easily adaptable to new situations.
- B. Social media is an ineffective solution because the policy may not align with the business.
- C. Social media is an effective solution because it implements SSL encryption.
- D. Social media is an ineffective solution because it is not primarily intended for business applications.

Correct Answer: B

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 11

News outlets are beginning to report on a number of retail establishments that are experiencing payment card data breaches. The data exfiltration is enabled by malware on a compromised computer. After the initial exploit, network mapping and fingerprinting is conducted to prepare for further exploitation. Which of the following is the MOST effective solution to protect against unrecognized malware infections?



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- A. Remove local admin permissions from all users and change anti-virus to a cloud aware, push technology.
- B. Implement an application whitelist at all levels of the organization.
- C. Deploy a network based heuristic IDS, configure all layer 3 switches to feed data to the IDS for more effective monitoring.
- D. Update router configuration to pass all network traffic through a new proxy server with advanced malware detection.

Correct Answer: B

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 12

A security administrator notices a recent increase in workstations becoming compromised by malware. Often, the malware is delivered via drive-by downloads, from malware hosting websites, and is not being detected by the corporate antivirus. Which of the following solutions would provide the BEST protection for the company?

- A. Increase the frequency of antivirus downloads and install updates to all workstations.
- B. Deploy a cloud-based content filter and enable the appropriate category to prevent further infections.
- C. Deploy a WAF to inspect and block all web traffic which may contain malware and exploits.
- D. Deploy a web based gateway antivirus server to intercept viruses before they enter the network.

Correct Answer: B

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Section: Research and Analysis**Explanation****Explanation/Reference:****QUESTION 13**

A security administrator wants to calculate the ROI of a security design which includes the purchase of new equipment. The equipment costs \$50,000 and it will take 50 hours to install and configure the equipment. The administrator plans to hire a contractor at a rate of \$100/hour to do the installation. Given that the new design and equipment will allow the company to increase revenue and make an additional \$100,000 on the first year, which of the following is the ROI expressed as a percentage for the first year?

- A. -45 percent
- B. 5.5 percent
- C. 45 percent
- D. 82 percent

Correct Answer: D

Section: Research and Analysis**Explanation****Explanation/Reference:****QUESTION 14**

A new internal network segmentation solution will be implemented into the enterprise that consists of 200 internal firewalls. As part of running a pilot exercise, it was determined that it takes three changes to deploy a new application onto the network before it is operational. Security now has a significant effect on overall availability. Which of the following would be the FIRST process to perform as a result of these findings?

- A. Lower the SLA to a more tolerable level and perform a risk assessment to see if the solution could be met by another solution. Reuse the firewall infrastructure on other projects.
- B. Perform a cost benefit analysis and implement the solution as it stands as long as the risks are understood by the business owners around the availability issues. Decrease the current SLA expectations to match the new solution.
- C. Engage internal auditors to perform a review of the project to determine why and how the project did not meet the security requirements. As part of the review ask them to review the control effectiveness.
- D. Review to determine if control effectiveness is in line with the complexity of the solution. Determine if the requirements can be met with a simpler solution.

Correct Answer: D

Section: Research and Analysis**Explanation**

Explanation/Reference:

QUESTION 15

A Chief Financial Officer (CFO) has raised concerns with the Chief Information Security Officer (CISO) because money has been spent on IT security infrastructure, but corporate assets are still found to be vulnerable. The business recently funded a patch management product and SOE hardening initiative. A third party auditor reported findings against the business because some systems were missing patches. Which of the following statements BEST describes this situation?

- A. The CFO is at fault because they are responsible for patching the systems and have already been given patch management and SOE hardening products.
- B. The audit findings are invalid because remedial steps have already been applied to patch servers and the remediation takes time to complete.
- C. The CISO has not selected the correct controls and the audit findings should be assigned to them instead of the CFO.
- D. Security controls are generally never 100% effective and gaps should be explained to stakeholders and managed accordingly.

Correct Answer: D

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 16

The Information Security Officer (ISO) is reviewing a summary of the findings from the last COOP tabletop exercise. The Chief Information Officer (CIO) wants to determine which additional controls must be implemented to reduce the risk of an extended customer service outage due to the VoIP system being unavailable. Which of the following BEST describes the scenario presented and the document the ISO is reviewing?

- A. The ISO is evaluating the business implications of a recent telephone system failure within the BIA.
- B. The ISO is investigating the impact of a possible downtime of the messaging system within the RA.
- C. The ISO is calculating the budget adjustment needed to ensure audio/video system redundancy within the RFQ.
- D. The ISO is assessing the effect of a simulated downtime involving the telecommunication system within the AAR.

Correct Answer: D

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 17

Which of the following activities is commonly deemed "OUT OF SCOPE" when undertaking a penetration test?

- A. Test password complexity of all login fields and input validation of form fields
- B. Reverse engineering any thick client software that has been provided for the test
- C. Undertaking network-based denial of service attacks in production environment
- D. Attempting to perform blind SQL injection and reflected cross-site scripting attacks
- E. Running a vulnerability scanning tool to assess network and host weaknesses

Correct Answer: C

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 18

A company is in the process of implementing a new front end user interface for its customers, the goal is to provide them with more self service functionality. The application has been written by developers over the last six months and the project is currently in the test phase.

Which of the following security activities should be implemented as part of the SDL in order to provide the MOST security coverage over the solution? (Select TWO).

- A. Perform unit testing of the binary code
- B. Perform code review over a sampling of the front end source code
- C. Perform black box penetration testing over the solution
- D. Perform grey box penetration testing over the solution
- E. Perform static code review over the front end source code

Correct Answer: DE

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 19

A new web based application has been developed and deployed in production. A security engineer decides to use an HTTP interceptor for testing the application. Which of the following problems would MOST likely be uncovered by this tool?

- A. The tool could show that input validation was only enabled on the client side
- B. The tool could enumerate backend SQL database table and column names

- C. The tool could force HTTP methods such as DELETE that the server has denied
- D. The tool could fuzz the application to determine where memory leaks occur

Correct Answer: A

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 20

A security consultant is conducting a network assessment and wishes to discover any legacy backup Internet connections the network may have. Where would the consultant find this information and why would it be valuable?

- A. This information can be found in global routing tables, and is valuable because backup connections typically do not have perimeter protection as strong as the primary connection.
- B. This information can be found by calling the regional Internet registry, and is valuable because backup connections typically do not require VPN access to the network.
- C. This information can be found by accessing telecom billing records, and is valuable because backup connections typically have much lower latency than primary connections.
- D. This information can be found by querying the network's DNS servers, and is valuable because backup DNS servers typically allow recursive queries from Internet hosts.

Correct Answer: A

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 21

A network administrator with a company's NSP has received a CERT alert for targeted adversarial behavior at the company. In addition to the company's physical security, which of the following can the network administrator use to detect the presence of a malicious actor physically accessing the company's network or information systems from within? (Select TWO).

- A. RAS
- B. Vulnerability scanner
- C. HTTP intercept
- D. HIDS

- E. Port scanner
- F. Protocol analyzer

Correct Answer: DF

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 22

The security engineer receives an incident ticket from the helpdesk stating that DNS lookup requests are no longer working from the office. The network team has ensured that Layer 2 and Layer 3 connectivity are working. Which of the following tools would a security engineer use to make sure the DNS server is listening on port 53?

- A. PING
- B. NESSUS
- C. NSLOOKUP
- D. NMAP

Correct Answer: D

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 23

A human resources manager at a software development company has been tasked with recruiting personnel for a new cyber defense division in the company. This division will require personnel to have high technology skills and industry certifications. Which of the following is the BEST method for this manager to gain insight into this industry to execute the task?

- A. Interview candidates, attend training, and hire a staffing company that specializes in technology jobs



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- B. Interview employees and managers to discover the industry hot topics and trends
- C. Attend meetings with staff, internal training, and become certified in software management
- D. Attend conferences, webinars, and training to remain current with the industry and job requirements

Correct Answer: D

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 24

The Chief Information Security Officer (CISO) is asking for ways to protect against zero-day exploits. The CISO is concerned that an unrecognized threat could compromise corporate data and result in regulatory fines as well as poor corporate publicity. The network is mostly flat, with split staff/guest wireless functionality. Which of the following equipment **MUST** be deployed to guard against unknown threats?

- A. Cloud-based antivirus solution, running as local admin, with push technology for definition updates.
- B. Implementation of an offsite data center hosting all company data, as well as deployment of VDI for all client computing needs.
- C. Host based heuristic IPS, segregated on a management VLAN, with direct control of the perimeter firewall ACLs.
- D. Behavior based IPS with a communication link to a cloud based vulnerability and threat feed.

Correct Answer: D

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 25

A small company's Chief Executive Officer (CEO) has asked its Chief Security Officer (CSO) to improve the company's security posture quickly with regard to targeted attacks. Which of the following should the CSO conduct **FIRST**?

- A. Survey threat feeds from services inside the same industry.
- B. Purchase multiple threat feeds to ensure diversity and implement blocks for malicious traffic.
- C. Conduct an internal audit against industry best practices to perform a qualitative analysis.
- D. Deploy a UTM solution that receives frequent updates from a trusted industry vendor.

Correct Answer: A

Section: Research and Analysis

Explanation

Explanation/Reference:

QUESTION 26

A security engineer is working on a large software development project. As part of the design of the project, various stakeholder requirements were gathered and decomposed to an implementable and testable level. Various security requirements were also documented. Organize the following security requirements into the correct hierarchy required for an SRTM.

Requirement 1: The system shall provide confidentiality for data in transit and data at rest.

Requirement 2: The system shall use SSL, SSH, or SCP for all data transport.

Requirement 3: The system shall implement a file-level encryption scheme.

Requirement 4: The system shall provide integrity for all data at rest.

Requirement 5: The system shall perform CRC checks on all files.

- A. Level 1: Requirements 1 and 4; Level 2: Requirements 2, 3, and 5
- B. Level 1: Requirements 1 and 4; Level 2: Requirements 2 and 3 under 1, Requirement 5 under 4
- C. Level 1: Requirements 1 and 4; Level 2: Requirement 2 under 1, Requirement 5 under 4; Level 3: Requirement 3 under 2
- D. Level 1: Requirements 1, 2, and 3; Level 2: Requirements 4 and 5

Correct Answer: B

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 27

A mature organization with legacy information systems has incorporated numerous new processes and dependencies to manage security as its networks and infrastructure are modernized. The Chief Information Office has become increasingly frustrated with frequent releases, stating that the organization needs everything to work completely, and the vendor should already have those desires built into the software product. The vendor has been in constant communication with personnel and groups within the organization to understand its business process and capture new software requirements from users. Which of the following methods of software development is this organization's configuration management process using?

- A. Agile
- B. SDL
- C. Waterfall
- D. Joint application development

Correct Answer: A

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 28

A security engineer is a new member to a configuration board at the request of management. The company has two new major IT projects starting this year and wants to plan security into the application deployment. The board is primarily concerned with the applications' compliance with federal assessment and authorization standards. The security engineer asks for a timeline to determine when a security assessment of both applications should occur and does not attend subsequent configuration board meetings. If the security engineer is only going to perform a security assessment, which of the following steps in system authorization has the security engineer omitted?

- A. Establish the security control baseline
- B. Build the application according to software development security standards
- C. Review the results of user acceptance testing
- D. Consult with the stakeholders to determine which standards can be omitted

Correct Answer: A

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 29

An analyst connects to a company web conference hosted on www.webconference.com/meetingID#01234 and observes that numerous guests have been allowed to join, without providing identifying information. The topics covered during the web conference are considered proprietary to the company. Which of the following security concerns does the analyst present to management?

- A. Guest users could present a risk to the integrity of the company's information
- B. Authenticated users could sponsor guest access that was previously approved by management
- C. Unauthenticated users could present a risk to the confidentiality of the company's information
- D. Meeting owners could sponsor guest access if they have passed a background check

Correct Answer: C

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 30

During a recent audit of servers, a company discovered that a network administrator, who required remote access, had deployed an unauthorized remote access application that communicated over common ports already allowed through the firewall. A network scan showed that this remote access application had already been installed on one third of the servers in the company. Which of the following is the MOST appropriate action that the company should take to provide a more appropriate solution?

- A. Implement an IPS to block the application on the network
- B. Implement the remote application out to the rest of the servers
- C. Implement SSL VPN with SAML standards for federation
- D. Implement an ACL on the firewall with NAT for remote access

Correct Answer: C

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 31

A small retail company recently deployed a new point of sale (POS) system to all 67 stores. The core of the POS is an extranet site, accessible only from retail stores and the corporate office over a split-tunnel VPN. An additional split-tunnel VPN provides bi-directional connectivity back to the main office, which provides voice connectivity for store VoIP phones. Each store offers guest wireless functionality, as well as employee wireless. Only the staff wireless network has access to the POS VPN. Recently, stores are reporting poor response times when accessing the POS application from store computers as well as degraded voice quality when making phone calls. Upon investigation, it is determined that three store PCs are hosting malware, which is generating excessive network traffic. After malware removal, the information security department is asked to review the configuration and suggest changes to prevent this from happening again. Which of the following denotes the BEST way to mitigate future malware risk?

- A. Deploy new perimeter firewalls at all stores with UTM functionality.
- B. Change antivirus vendors at the store and the corporate office.
- C. Move to a VDI solution that runs offsite from the same data center that hosts the new POS solution.
- D. Deploy a proxy server with content filtering at the corporate office and route all traffic through it.

Correct Answer: A

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 32

Executive management is asking for a new manufacturing control and workflow automation solution. This application will facilitate management of proprietary information and closely guarded corporate trade secrets.

The information security team has been a part of the department meetings and come away with the following notes:

- Human resources would like complete access to employee data stored in the application. They would like automated data interchange with the employee management application, a cloud-based SaaS application.
- Sales is asking for easy order tracking to facilitate feedback to customers.
- Legal is asking for adequate safeguards to protect trade secrets. They are also concerned with data ownership questions and legal jurisdiction.
- Manufacturing is asking for ease of use. Employees working the assembly line cannot be bothered with additional steps or overhead. System interaction needs to be quick and easy.
- Quality assurance is concerned about managing the end product and tracking overall performance of the product being produced. They would like read-only access to the entire workflow process for monitoring and baselining.

The favored solution is a user friendly software application that would be hosted onsite. It has extensive ACL functionality, but also has readily available APIs for extensibility. It supports read-only access, kiosk automation, custom fields, and data encryption.

Which of the following departments' request is in contrast to the favored solution?

- A. Manufacturing
- B. Legal
- C. Sales
- D. Quality assurance
- E. Human resources

Correct Answer: E

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 33

The helpdesk manager wants to find a solution that will enable the helpdesk staff to better serve company employees who call with computer-related problems. The helpdesk staff is currently unable to perform effective troubleshooting and relies on callers to describe their technology problems. Given that the helpdesk staff is located within the company headquarters and 90% of the callers are telecommuters, which of the following tools should the helpdesk manager use to make the staff more effective at troubleshooting while at the same time reducing company costs? (Select TWO).

- A. Web cameras
- B. Email
- C. Instant messaging
- D. BYOD
- E. Desktop sharing
- F. Presence

Correct Answer: CE

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 34

An intruder was recently discovered inside the data center, a highly sensitive area. To gain access, the intruder circumvented numerous layers of physical and electronic security measures. Company leadership has asked for a thorough review of physical security controls to prevent this from happening again. Which of the following departments are the MOST heavily invested in rectifying the problem? (Select THREE).

- A. Facilities management
- B. Human resources
- C. Research and development
- D. Programming
- E. Data center operations
- F. Marketing
- G. Information technology

Correct Answer: AEG

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 35

A completely new class of web-based vulnerabilities has been discovered. Claims have been made that all common web-based development frameworks are susceptible to attack. Proof-of-concept details have emerged on the Internet. A security advisor within a company has been asked to provide recommendations on how to respond quickly to these vulnerabilities. Which of the following BEST describes how the security advisor should respond?

- A. Assess the reliability of the information source, likelihood of exploitability, and impact to hosted data. Attempt to exploit via the proof-of-concept code. Consider remediation options.
- B. Hire an independent security consulting agency to perform a penetration test of the web servers. Advise management of any 'high' or 'critical' penetration test findings and put forward recommendations for mitigation.
- C. Review vulnerability write-ups posted on the Internet. Respond to management with a recommendation to wait until the news has been independently verified by software vendors providing the web application software.
- D. Notify all customers about the threat to their hosted data. Bring the web servers down into "maintenance mode" until the vulnerability can be reliably mitigated through a vendor patch.

Correct Answer: A

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 36

A company sales manager received a memo from the company's financial department which stated that the company would not be putting its software products through the same security testing as previous years to reduce the research and development cost by 20 percent for the upcoming year. The memo also stated that the marketing material and service level agreement for each product would remain unchanged. The sales manager has reviewed the sales goals for the upcoming year and identified an increased target across the software products that will be affected by the financial department's change. All software products will continue to go through new development in the coming year. Which of the following should the sales manager do to ensure the company stays out of trouble?

- A. Discuss the issue with the software product's user groups
- B. Consult the company's legal department on practices and law
- C. Contact senior finance management and provide background information
- D. Seek industry outreach for software practices and law

Correct Answer: B

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 37

A member of the software development team has requested advice from the security team to implement a new secure lab for testing malware. Which of the following is the NEXT step that the security team should take?



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- A. Purchase new hardware to keep the malware isolated.
- B. Develop a policy to outline what will be required in the secure lab.
- C. Construct a series of VMs to host the malware environment.
- D. Create a proposal and present it to management for approval.

Correct Answer: D

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 38

A company has issued a new mobile device policy permitting BYOD and company-issued devices. The company-issued device has a managed middleware client that restricts the applications allowed on company devices and provides those that are approved. The middleware client provides configuration standardization for both company owned and BYOD to secure data and communication to the device according to industry best practices. The policy states that, "BYOD clients must meet the company's infrastructure requirements to permit a connection." The company also issues a memorandum separate from the policy, which provides instructions for the purchase, installation, and use of the middleware client on BYOD. Which of the following is being described?

- A. Asset management
- B. IT governance
- C. Change management
- D. Transference of risk

Correct Answer: B

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 39

A security engineer on a large enterprise network needs to schedule maintenance within a fixed window of time. A total outage period of four hours is permitted for servers. Workstations can undergo maintenance from 8:00 pm to 6:00 am daily. Which of the following can specify parameters for the maintenance work? (Select TWO).

- A. Managed security service
- B. Memorandum of understanding
- C. Quality of service
- D. Network service provider
- E. Operating level agreement

Correct Answer: BE

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 40

An organization has decided to reduce labor costs by outsourcing back office processing of credit applications to a provider located in another country. Data sovereignty and privacy concerns raised by the security team resulted in the third-party provider only accessing and processing the data via remote desktop sessions. To facilitate communications and improve productivity, staff at the third party has been provided with corporate email accounts that are only accessible via the remote desktop sessions. Email forwarding is blocked and staff at the third party can only communicate with staff within the organization. Which of the following additional controls should be implemented to prevent data loss? (Select THREE).

- A. Implement hashing of data in transit
- B. Session recording and capture
- C. Disable cross session cut and paste
- D. Monitor approved credit accounts
- E. User access audit reviews
- F. Source IP whitelisting

Correct Answer: CEF

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 41

A company has received the contract to begin developing a new suite of software tools to replace an aging collaboration solution. The original collaboration solution has been in place for nine years, contains over a million lines of code, and took over two years to develop originally. The SDLC has been broken up into eight primary stages, with each stage requiring an in-depth risk analysis before moving on to the next phase. Which of the following software development methods is MOST applicable?

- A. Spiral model
- B. Incremental model
- C. Waterfall model
- D. Agile model

Correct Answer: C

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 42

An attacker attempts to create a DoS event against the VoIP system of a company. The attacker uses a tool to flood the network with a large number of SIP INVITE traffic. Which of the following would be LEAST likely to thwart such an attack?

- A. Install IDS/IPS systems on the network
- B. Force all SIP communication to be encrypted
- C. Create separate VLANs for voice and data traffic
- D. Implement QoS parameters on the switches

Correct Answer: D

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 43

The helpdesk department desires to roll out a remote support application for internal use on all company computers. This tool should allow remote desktop sharing, system log gathering, chat, hardware logging, inventory management, and remote registry access. The risk management team has been asked to review vendor responses to the RFQ. Which of the following questions is the MOST important?

- A. What are the protections against MITM?

- B. What accountability is built into the remote support application?
- C. What encryption standards are used in tracking database?
- D. What snapshot or “undo” features are present in the application?
- E. What encryption standards are used in remote desktop and file transfer functionality?

Correct Answer: B

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 44

A software development manager is taking over an existing software development project. The team currently suffers from poor communication due to a long delay between requirements documentation and feature delivery. This gap is resulting in an above average number of security-related bugs making it into production. Which of the following development methodologies is the team MOST likely using now?

- A. Agile
- B. Waterfall
- C. Scrum
- D. Spiral

Correct Answer: B

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 45

A security manager has received the following email from the Chief Financial Officer (CFO):

“While I am concerned about the security of the proprietary financial data in our ERP application, we have had a lot of turnover in the accounting group and I am having a difficult time meeting our monthly performance targets. As things currently stand, we do not allow employees to work from home but this is something I am willing to allow so we can get back on track. What should we do first to securely enable this capability for my group?”

Based on the information provided, which of the following would be the MOST appropriate response to the CFO?

- A. Remote access to the ERP tool introduces additional security vulnerabilities and should not be allowed.
- B. Allow VNC access to corporate desktops from personal computers for the users working from home.
- C. Allow terminal services access from personal computers after the CFO provides a list of the users working from home.

D. Work with the executive management team to revise policies before allowing any remote access.

Correct Answer: D

Section: Integration of Computing, Communications and Business Disciplines

Explanation

Explanation/Reference:

QUESTION 46

Three companies want to allow their employees to seamlessly connect to each other's wireless corporate networks while keeping one consistent wireless client configuration. Each company wants to maintain its own authentication infrastructure and wants to ensure that an employee who is visiting the other two companies is authenticated by the home office when connecting to the other companies' wireless network. All three companies have agreed to standardize on 802.1x EAP-PEAP-MSCHAPv2 for client configuration. Which of the following should the three companies implement?

- A. The three companies should agree on a single SSID and configure a hierarchical RADIUS system which implements trust delegation.
- B. The three companies should implement federated authentication through Shibboleth connected to an LDAP backend and agree on a single SSID.
- C. The three companies should implement a central portal-based single sign-on and agree to use the same CA when issuing client certificates.
- D. All three companies should use the same wireless vendor to facilitate the use of a shared cloud based wireless controller.

Correct Answer: A

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 47

Company XYZ provides cable television service to several regional areas. They are currently installing fiber-to-the-home in many areas with hopes of also providing telephone and Internet services. The telephone and Internet services portions of the company will each be separate subsidiaries of the parent company. The board of directors wishes to keep the subsidiaries separate from the parent company. However all three companies must share customer data for the purposes of accounting, billing, and customer authentication. The solution must use open standards, and be simple and seamless for customers, while only sharing minimal data between the companies. Which of the following solutions is BEST suited for this scenario?

- A. The companies should federate, with the parent becoming the SP, and the subsidiaries becoming an IdP.
- B. The companies should federate, with the parent becoming the IdP, and the subsidiaries becoming an SSP.
- C. The companies should federate, with the parent becoming the IdP, and the subsidiaries becoming an SP.
- D. The companies should federate, with the parent becoming the ASP, and the subsidiaries becoming an IdP.

Correct Answer: C

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 48

Company A needs to export sensitive data from its financial system to company B's database, using company B's API in an automated manner. Company A's policy prohibits the use of any intermediary external systems to transfer or store its sensitive data, therefore the transfer must occur directly between company A's financial system and company B's destination server using the supplied API. Additionally, company A's legacy financial software does not support encryption, while company B's API supports encryption. Which of the following will provide end-to-end encryption for the data transfer while adhering to these requirements?

- A. Company A must install an SSL tunneling software on the financial system.
- B. Company A's security administrator should use an HTTPS capable browser to transfer the data.
- C. Company A should use a dedicated MPLS circuit to transfer the sensitive data to company B.
- D. Company A and B must create a site-to-site IPsec VPN on their respective firewalls.

Correct Answer: A

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 49

A security company is developing a new cloud-based log analytics platform. Its purpose is to allow:

- Customers to upload their log files to the "big data" platform
- Customers to perform remote log search
- Customers to integrate into the platform using an API so that third party business intelligence tools can be used for the purpose of trending, insights, and/or discovery

Which of the following are the BEST security considerations to protect data from one customer being disclosed to other customers? (Select THREE).

- A. Secure storage and transmission of API keys
- B. Secure protocols for transmission of log files and search results
- C. At least two years retention of log files in case of e-discovery requests
- D. Multi-tenancy with RBAC support
- E. Sanitizing filters to prevent upload of sensitive log file contents

F. Encryption of logical volumes on which the customers' log files reside

Correct Answer: ABD

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 50

A penetration tester is assessing a mobile banking application. Man-in-the-middle attempts via a HTTP intercepting proxy are failing with SSL errors. Which of the following controls has likely been implemented by the developers?

- A. SSL certificate revocation
- B. SSL certificate pinning
- C. Mobile device root-kit detection
- D. Extended Validation certificates

Correct Answer: B

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 51

A system administrator needs to meet the maximum amount of security goals for a new DNS infrastructure. The administrator deploys DNSSEC extensions to the domain names and infrastructure. Which of the following security goals does this meet? (Select TWO).

- A. Availability
- B. Authentication
- C. Integrity
- D. Confidentiality



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E. Encryption

Correct Answer: BC

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 52

The risk manager is reviewing a report which identifies a requirement to keep a business critical legacy system operational for the next two years. The legacy system is out of support because the vendor and security patches are no longer released. Additionally, this is a proprietary embedded system and little is documented and known about it. Which of the following should the Information Technology department implement to reduce the security risk from a compromise of this system?

- A. Virtualize the system and migrate it to a cloud provider.
- B. Segment the device on its own secure network.
- C. Install an antivirus and HIDS on the system.
- D. Hire developers to reduce vulnerabilities in the code.

Correct Answer: B

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 53

An organization would like to allow employees to use their network username and password to access a third-party service. The company is using Active Directory Federated Services for their directory service. Which of the following should the company ensure is supported by the third-party? (Select TWO).

- A. LDAP/S
- B. SAML
- C. NTLM
- D. OAUTH
- E. Kerberos

Correct Answer: BE

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 54

An extensible commercial software system was upgraded to the next minor release version to patch a security vulnerability. After the upgrade, an unauthorized intrusion into the system was detected. The software vendor is called in to troubleshoot the issue and reports that all core components were updated properly. Which of the following has been overlooked in securing the system? (Select TWO).

- A. The company's IDS signatures were not updated.
- B. The company's custom code was not patched.
- C. The patch caused the system to revert to http.
- D. The software patch was not cryptographically signed.
- E. The wrong version of the patch was used.
- F. Third-party plug-ins were not patched.

Correct Answer: BF

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 55

A forensic analyst works for an e-discovery firm where several gigabytes of data are processed daily. While the business is lucrative, they do not have the resources or the scalability to adequately serve their clients. Since it is an e-discovery firm where chain of custody is important, which of the following scenarios should they consider?

- A. Offload some data processing to a public cloud
- B. Aligning their client intake with the resources available
- C. Using a community cloud with adequate controls
- D. Outsourcing the service to a third party cloud provider

Correct Answer: C

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 56

A company is deploying a new iSCSI-based SAN. The requirements are as follows:

- SAN nodes must authenticate each other.
- Shared keys must NOT be used.
- Do NOT use encryption in order to gain performance.

Which of the following design specifications meet all the requirements? (Select TWO).

- A. Targets use CHAP authentication
- B. IPSec using AH with PKI certificates for authentication
- C. Fiber channel should be used with AES
- D. Initiators and targets use CHAP authentication
- E. Fiber channel over Ethernet should be used
- F. IPSec using AH with PSK authentication and 3DES
- G. Targets have SCSI IDs for authentication

Correct Answer: BD

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 57

Company XYZ provides hosting services for hundreds of companies across multiple industries including healthcare, education, and manufacturing. The security architect for company XYZ is reviewing a vendor proposal to reduce company XYZ's hardware costs by combining multiple physical hosts through the use of virtualization technologies. The security architect notes concerns about data separation, confidentiality, regulatory requirements concerning PII, and administrative complexity on the proposal. Which of the following BEST describes the core concerns of the security architect?

- A. Most of company XYZ's customers are willing to accept the risks of unauthorized disclosure and access to information by outside users.
- B. The availability requirements in SLAs with each hosted customer would have to be re-written to account for the transfer of virtual machines between physical platforms for regular maintenance.
- C. Company XYZ could be liable for disclosure of sensitive data from one hosted customer when accessed by a malicious user who has gained access to the virtual machine of another hosted customer.
- D. Not all of company XYZ's customers require the same level of security and the administrative complexity of maintaining multiple security postures on a single hypervisor negates hardware cost savings.

Correct Answer: C

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 58

A university requires a significant increase in web and database server resources for one week, twice a year, to handle student registration. The web servers remain idle for the rest of the year. Which of the following is the MOST cost effective way for the university to securely handle student registration?

- A. Virtualize the web servers locally to add capacity during registration.
- B. Move the database servers to an elastic private cloud while keeping the web servers local.
- C. Move the database servers and web servers to an elastic private cloud.
- D. Move the web servers to an elastic public cloud while keeping the database servers local.

Correct Answer: D

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 59

Due to a new regulatory requirement, ABC Company must now encrypt all WAN transmissions. When speaking with the network administrator, the security administrator learns that the existing routers have the minimum processing power to do the required level of encryption. Which of the following solutions minimizes the performance impact on the router?

- A. Deploy inline network encryption devices
- B. Install an SSL acceleration appliance
- C. Require all core business applications to use encryption
- D. Add an encryption module to the router and configure IPSec

Correct Answer: A

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 60

In order to reduce costs and improve employee satisfaction, a large corporation is creating a BYOD policy. It will allow access to email and remote connections to the corporate enterprise from personal devices; provided they are on an approved device list. Which of the following security measures would be MOST effective in securing the enterprise under the new policy? (Select TWO).

- A. Provide free email software for personal devices.
- B. Encrypt data in transit for remote access.
- C. Require smart card authentication for all devices.
- D. Implement NAC to limit insecure devices access.
- E. Enable time of day restrictions for personal devices.

Correct Answer: BD

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 61

A security administrator is tasked with implementing two-factor authentication for the company VPN. The VPN is currently configured to authenticate VPN users against a backend RADIUS server. New company policies require a second factor of authentication, and the Information Security Officer has selected PKI as the second factor. Which of the following should the security administrator configure and implement on the VPN concentrator to implement the second factor and ensure that no error messages are displayed to the user during the VPN connection? (Select TWO).

- A. The user's certificate private key must be installed on the VPN concentrator.
- B. The CA's certificate private key must be installed on the VPN concentrator.
- C. The user certificate private key must be signed by the CA.
- D. The VPN concentrator's certificate private key must be signed by the CA and installed on the VPN concentrator.
- E. The VPN concentrator's certificate private key must be installed on the VPN concentrator.
- F. The CA's certificate public key must be installed on the VPN concentrator.

Correct Answer: EF

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 62

Ann, a software developer, wants to publish her newly developed software to an online store. Ann wants to ensure that the software will not be modified by a third party or end users before being installed on mobile devices. Which of the following should Ann implement to stop modified copies of her software from running on mobile devices?

- A. Single sign-on
- B. Identity propagation
- C. Remote attestation
- D. Secure code review

Correct Answer: C

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 63

Two separate companies are in the process of integrating their authentication infrastructure into a unified single sign-on system. Currently, both companies use an AD backend and two factor authentication using TOTP. The system administrators have configured a trust relationship between the authentication backend to ensure proper process flow. How should the employees request access to shared resources before the authentication integration is complete?



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- A. They should logon to the system using the username concatenated with the 6-digit code and their original password.
- B. They should logon to the system using the newly assigned global username: first.lastname#### where #### is the second factor code.
- C. They should use the username format: LAN\first.lastname together with their original password and the next 6-digit code displayed when the token button is depressed.
- D. They should use the username format: first.lastname@company.com, together with a password and their 6-digit code.

Correct Answer: D

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 64

An industry organization has implemented a system to allow trusted authentication between all of its partners. The system consists of a web of trusted RADIUS servers communicating over the Internet. An attacker was able to set up a malicious server and conduct a successful man-in-the-middle attack. Which of the following controls should be implemented to mitigate the attack in the future?

- A. Use PAP for secondary authentication on each RADIUS server
- B. Disable unused EAP methods on each RADIUS server
- C. Enforce TLS connections between RADIUS servers
- D. Use a shared secret for each pair of RADIUS servers

Correct Answer: C

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 65

Joe, the Chief Executive Officer (CEO), was an Information security professor and a Subject Matter Expert for over 20 years. He has designed a network defense method which he says is significantly better than prominent international standards. He has recommended that the company use his cryptographic method. Which of the following methodologies should be adopted?

- A. The company should develop an in-house solution and keep the algorithm a secret.
- B. The company should use the CEO's encryption scheme.
- C. The company should use a mixture of both systems to meet minimum standards.
- D. The company should use the method recommended by other respected information security organizations.

Correct Answer: D

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 66

Which of the following BEST constitutes the basis for protecting VMs from attacks from other VMs hosted on the same physical platform?

- A. Aggressive patch management on the host and guest OSs.
- B. Host based IDS sensors on all guest OSs.
- C. Different antivirus solutions between the host and guest OSs.
- D. Unique Network Interface Card (NIC) assignment per guest OS.

Correct Answer: A

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 67

Two universities are making their 802.11n wireless networks available to the other university's students. The infrastructure will pass the student's credentials back to the home school for authentication via the Internet.

The requirements are:

- Mutual authentication of clients and authentication server
- The design should not limit connection speeds
- Authentication must be delegated to the home school
- No passwords should be sent unencrypted

The following design was implemented:

- WPA2 Enterprise using EAP-PEAP-MSCHAPv2 will be used for wireless security
- RADIUS proxy servers will be used to forward authentication requests to the home school
- The RADIUS servers will have certificates from a common public certificate authority

A strong shared secret will be used for RADIUS server authentication

Which of the following security considerations should be added to the design?

- A. The transport layer between the RADIUS servers should be secured
- B. WPA Enterprise should be used to decrease the network overhead
- C. The RADIUS servers should have local accounts for the visiting students
- D. Students should be given certificates to use for authentication to the network

Correct Answer: A

Section: Technical Integration of Enterprise Components

Explanation

Explanation/Reference:

QUESTION 68

A company with 2000 workstations is considering purchasing a HIPS to minimize the impact of a system compromise from malware. Currently, the company projects a total cost of \$50,000 for the next three years responding to and eradicating workstation malware. The Information Security Officer (ISO) has received three quotes from different companies that provide HIPS.

- The first quote requires a \$10,000 one-time fee, annual cost of \$6 per workstation, and a 10% annual support fee based on the number of workstations.
- The second quote requires a \$15,000 one-time fee, an annual cost of \$5 per workstation, and a 12% annual fee based on the number of workstations.
- The third quote has no one-time fee, an annual cost of \$8 per workstation, and a 15% annual fee based on the number of workstations.

Which solution should the company select if the contract is only valid for three years?

- A. First quote
- B. Second quote
- C. Third quote
- D. Accept the risk

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 69

Customers are receiving emails containing a link to malicious software. These emails are subverting spam filters. The email reads as follows:

Delivered-To: customer@example.com

Received: by 10.14.120.205

Mon, 1 Nov 2010 11:15:24 -0700 (PDT)

Received: by 10.231.31.193

Mon, 01 Nov 2010 11:15:23 -0700 (PDT)

Return-Path: <IT@company.com>

Received: from 127.0.0.1 for <customer@example.com>; Mon, 1 Nov 2010 13:15:14 -0500 (envelope-from <IT@company.com>)

Received: by smtpex.example.com (SMTP READY)

with ESMTP (AIO); Mon, 01 Nov 2010 13:15:14 -0500

Received: from 172.18.45.122 by 192.168.2.55; Mon, 1 Nov 2010 13:15:14 -0500

From: Company <IT@Company.com>

To: "customer@example.com" <customer@example.com>

Date: Mon, 1 Nov 2010 13:15:11 -0500

Subject: New Insurance Application

Thread-Topic: New Insurance Application

Please download and install software from the site below to maintain full access to your account.

www.examplesite.com

Additional information: The authorized mail servers IPs are 192.168.2.10 and 192.168.2.11.

The network's subnet is 192.168.2.0/25.

Which of the following are the MOST appropriate courses of action a security administrator could take to eliminate this risk? (Select TWO).

- A. Identify the origination point for malicious activity on the unauthorized mail server.
- B. Block port 25 on the firewall for all unauthorized mail servers.
- C. Disable open relay functionality.
- D. Shut down the SMTP service on the unauthorized mail server.
- E. Enable STARTTLS on the spam filter.

Correct Answer: BD

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 70

A web developer is responsible for a simple web application that books holiday accommodations. The front-facing web server offers an HTML form, which asks for a user's age. This input gets placed into a signed integer variable and is then checked to ensure that the user is in the adult age range.

Users have reported that the website is not functioning correctly. The web developer has inspected log files and sees that a very large number (in the billions) was submitted just before the issue started occurring. Which of the following is the MOST likely situation that has occurred?

- A. The age variable stored the large number and filled up disk space which stopped the application from continuing to function. Improper error handling prevented the application from recovering.
- B. The age variable has had an integer overflow and was assigned a very small negative number which led to unpredictable application behavior. Improper error handling prevented the application from recovering.
- C. Computers are able to store numbers well above "billions" in size. Therefore, the website issues are not related to the large number being input.
- D. The application has crashed because a very large integer has lead to a "divide by zero". Improper error handling prevented the application from recovering.

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 71

A company has decided to change its current business direction and refocus on core business. Consequently, several company sub-businesses are in the process of being sold-off. A security consultant has been engaged to advise on residual information security concerns with a de-merger. From a high-level perspective, which of the following BEST provides the procedure that the consultant should follow?

- A. Perform a penetration test for the current state of the company. Perform another penetration test after the de-merger. Identify the gaps between the two tests.
- B. Duplicate security-based assets should be sold off for commercial gain to ensure that the security posture of the company does not decline.
- C. Explain that security consultants are not trained to offer advice on company acquisitions or demergers. This needs to be handled by legal representatives well versed in corporate law.
- D. Identify the current state from a security viewpoint. Based on the demerger, assess what the security gaps will be from a physical, technical, DR, and policy/awareness perspective.

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 72

It has come to the IT administrator's attention that the "post your comment" field on the company blog page has been exploited, resulting in cross-site scripting attacks against customers reading the blog. Which of the following would be the MOST effective at preventing the "post your comment" field from being exploited?

- A. Update the blog page to HTTPS
- B. Filter metacharacters
- C. Install HIDS on the server
- D. Patch the web application
- E. Perform client side input validation

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 73

A business unit of a large enterprise has outsourced the hosting and development of a new external website which will be accessed by premium customers, in order to speed up the time to market timeline. Which of the following is the MOST appropriate?

- A. The external party providing the hosting and website development should be obligated under contract to provide a secure service which is regularly tested (vulnerability and penetration). SLAs should be in place for the resolution of newly identified vulnerabilities and a guaranteed uptime.
- B. The use of external organizations to provide hosting and web development services is not recommended as the costs are typically higher than what can be achieved internally. In addition, compliance with privacy regulations becomes more complex and guaranteed uptimes are difficult to track and measure.
- C. Outsourcing transfers all the risk to the third party. An SLA should be in place for the resolution of newly identified vulnerabilities and penetration / vulnerability testing should be conducted regularly.
- D. Outsourcing transfers the risk to the third party, thereby minimizing the cost and any legal obligations. An MOU should be in place for the resolution of newly identified vulnerabilities and penetration / vulnerability testing should be conducted regularly.

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 74

An administrator is tasked with securing several website domains on a web server. The administrator elects to secure www.example.com, mail.example.org, archive.example.com, and www.example.org with the same certificate. Which of the following would allow the administrator to secure those domains with a single issued certificate?

- A. Intermediate Root Certificate
- B. Wildcard Certificate
- C. EV x509 Certificate
- D. Subject Alternative Names Certificate

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 75

An administrator wishes to replace a legacy clinical software product as it has become a security risk. The legacy product generates \$10,000 in revenue a month. The new software product has an initial cost of \$180,000 and a yearly maintenance of \$2,000 after the first year. However, it will generate \$15,000 in revenue per month and be more secure. How many years until there is a return on investment for this new package?

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

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 76

A large company is preparing to merge with a smaller company. The smaller company has been very profitable, but the smaller company's main applications were created in-house. Which of the following actions should the large company's security administrator take in preparation for the merger?

- A. A review of the mitigations implemented from the most recent audit findings of the smaller company should be performed.
- B. An ROI calculation should be performed to determine which company's application should be used.
- C. A security assessment should be performed to establish the risks of integration or co-existence.
- D. A regression test should be performed on the in-house software to determine security risks associated with the software.

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 77

Which of the following technologies prevents an unauthorized HBA from viewing iSCSI target information?



- A. Deduplication
- B. Data snapshots
- C. LUN masking
- D. Storage multipaths

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 78

Company ABC is hiring customer service representatives from Company XYZ. The representatives reside at Company XYZ's headquarters. Which of the following BEST prevents Company XYZ representatives from gaining access to unauthorized Company ABC systems?

- A. Require each Company XYZ employee to use an IPSec connection to the required systems
- B. Require Company XYZ employees to establish an encrypted VDI session to the required systems
- C. Require Company ABC employees to use two-factor authentication on the required systems
- D. Require a site-to-site VPN for intercompany communications

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 79

A Chief Information Security Officer (CISO) has requested that a SIEM solution be implemented. The CISO wants to know upfront what the projected TCO would be before looking further into this concern. Two vendor proposals have been received:

- Vendor A: product-based solution which can be purchased by the pharmaceutical company.
- Capital expenses to cover central log collectors, correlators, storage and management consoles expected to be \$150,000. Operational expenses are expected to be a 0.5 full time employee (FTE) to manage the solution, and 1 full time employee to respond to incidents per year.
- Vendor B: managed service-based solution which can be the outsourcer for the pharmaceutical company's needs.

Bundled offering expected to be \$100,000 per year.

Operational expenses for the pharmaceutical company to partner with the vendor are expected to be a 0.5 FTE per year.

Internal employee costs are averaged to be \$80,000 per year per FTE. Based on calculating TCO of the two vendor proposals over a 5 year period, which of the following options is MOST accurate?

- A. Based on cost alone, having an outsourced solution appears cheaper.
- B. Based on cost alone, having an outsourced solution appears to be more expensive.
- C. Based on cost alone, both outsourced and in-sourced solutions appear to be the same.
- D. Based on cost alone, having a purchased product solution appears cheaper.

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 80

A port in a fibre channel switch failed, causing a costly downtime on the company's primary website. Which of the following is the MOST likely cause of the downtime?

- A. The web server iSCSI initiator was down.
- B. The web server was not multipathed.
- C. The SAN snapshots were not up-to-date.
- D. The SAN replication to the backup site failed.

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 81

An internal development team has migrated away from Waterfall development to use Agile development. Overall, this has been viewed as a successful initiative by the stakeholders as it has improved time-to-market. However, some staff within the security team have contended that Agile development is not secure. Which of the following is the MOST accurate statement?

- A. Agile and Waterfall approaches have the same effective level of security posture. They both need similar amounts of security effort at the same phases of

development.

- B. Agile development is fundamentally less secure than Waterfall due to the lack of formal up-front design and inability to perform security reviews.
- C. Agile development is more secure than Waterfall as it is a more modern methodology which has the advantage of having been able to incorporate security best practices of recent years.
- D. Agile development has different phases and timings compared to Waterfall. Security activities need to be adapted and performed within relevant Agile phases.

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 82

A vulnerability scanner report shows that a client-server host monitoring solution operating in the credit card corporate environment is managing SSL sessions with a weak algorithm which does not meet corporate policy. Which of the following are true statements? (Select TWO).

- A. The X509 V3 certificate was issued by a non trusted public CA.
- B. The client-server handshake could not negotiate strong ciphers.
- C. The client-server handshake is configured with a wrong priority.
- D. The client-server handshake is based on TLS authentication.
- E. The X509 V3 certificate is expired.
- F. The client-server implements client-server mutual authentication with different certificates.

Correct Answer: BC

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 83

Which of the following represents important technical controls for securing a SAN storage infrastructure? (Select TWO).

- A. Synchronous copy of data
- B. RAID configuration
- C. Data de-duplication
- D. Storage pool space allocation

- E. Port scanning
- F. LUN masking/mapping
- G. Port mapping

Correct Answer: FG

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 84

An enterprise must ensure that all devices that connect to its networks have been previously approved. The solution must support dual factor mutual authentication with strong identity assurance. In order to reduce costs and administrative overhead, the security architect wants to outsource identity proofing and second factor digital delivery to the third party. Which of the following solutions will address the enterprise requirements?

- A. Implementing federated network access with the third party.
- B. Using a HSM at the network perimeter to handle network device access.
- C. Using a VPN concentrator which supports dual factor via hardware tokens.
- D. Implementing 802.1x with EAP-TTLS across the infrastructure.

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 85

A security administrator is performing VDI traffic data collection on a virtual server which migrates from one host to another. While reviewing the data collected by the protocol analyzer, the security administrator notices that sensitive data is present in the packet capture. Which of the following should the security administrator recommend to ensure the confidentiality of sensitive information during live VM migration, while minimizing latency issues?

- A. A separate physical interface placed on a private VLAN should be configured for live host operations.
- B. Database record encryption should be used when storing sensitive information on virtual servers.
- C. Full disk encryption should be enabled across the enterprise to ensure the confidentiality of sensitive data.
- D. Sensitive data should be stored on a backend SAN which uses an isolated fiber channel network.

Correct Answer: A

Section: Mixed Questions**Explanation****Explanation/Reference:****QUESTION 86**

Joe is a security architect who is tasked with choosing a new NIPS platform that has the ability to perform SSL inspection, analyze up to 10Gbps of traffic, can be centrally managed and only reveals inspected application payload data to specified internal security employees. Which of the following steps should Joe take to reach the desired outcome?

- A. Research new technology vendors to look for potential products. Contribute to an RFP and then evaluate RFP responses to ensure that the vendor product meets all mandatory requirements. Test the product and make a product recommendation.
- B. Evaluate relevant RFC and ISO standards to choose an appropriate vendor product. Research industry surveys, interview existing customers of the product and then recommend that the product be purchased.
- C. Consider outsourcing the product evaluation and ongoing management to an outsourced provider on the basis that each of the requirements are met and a lower total cost of ownership (TCO) is achieved.
- D. Choose a popular NIPS product and then consider outsourcing the ongoing device management to a cloud provider. Give access to internal security employees so that they can inspect the application payload data.
- E. Ensure that the NIPS platform can also deal with recent technological advancements, such as threats emerging from social media, BYOD and cloud storage prior to purchasing the product.

Correct Answer: A

Section: Mixed Questions**Explanation****Explanation/Reference:****QUESTION 87**

A penetration tester is inspecting traffic on a new mobile banking application and sends the following web request:

POST http://www.example.com/resources/NewBankAccount HTTP/1.1

Content-type: application/json

```
{
  "account":
  [
    { "creditAccount": "Credit Card Rewards account" } { "salesLeadRef": "www.example.com/badcontent/exploitme.exe" }
  ],
  "customer":
  [
```

```
{ "name": "Joe Citizen" } { "custRef": "3153151" }  
}  
}  
The banking website responds with:  
HTTP/1.1 200 OK  
{  
  "newAccountDetails":  
  [  
    { "cardNumber": "1234123412341234" } { "cardExpiry": "2020-12-31" }  
    { "cardCVV": "909" }  
  ],  
  "marketingCookieTracker": "JSESSIONID=000000001"  
  "returnCode": "Account added successfully"  
}
```

Which of the following are security weaknesses in this example? (Select TWO).

- A. Missing input validation on some fields
- B. Vulnerable to SQL injection
- C. Sensitive details communicated in clear-text
- D. Vulnerable to XSS
- E. Vulnerable to malware file uploads
- F. JSON/REST is not as secure as XML

Correct Answer: AC

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 88

Joe, a penetration tester, is tasked with testing the security robustness of the protocol between a mobile web application and a RESTful application server. Which of the following security tools would be required to assess the security between the mobile web application and the RESTful application server? (Select TWO).

- A. Jailbroken mobile device
- B. Reconnaissance tools
- C. Network enumerator
- D. HTTP interceptor

- E. Vulnerability scanner
- F. Password cracker

Correct Answer: DE

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 89

Ann is testing the robustness of a marketing website through an intercepting proxy. She has intercepted the following HTTP request:

```
POST /login.aspx HTTP/1.1
Host: comptia.org
Content-type: text/html
txtUsername=ann&txtPassword=ann&alreadyLoggedIn=false&submit=true
```

Which of the following should Ann perform to test whether the website is susceptible to a simple authentication bypass?

- A. Remove all of the post data and change the request to /login.aspx from POST to GET
- B. Attempt to brute force all usernames and passwords using a password cracker
- C. Remove the txtPassword post data and change alreadyLoggedIn from false to true
- D. Remove the txtUsername and txtPassword post data and toggle submit from true to false

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 90

An organization has implemented an Agile development process for front end web application development. A new security architect has just joined the company and wants to integrate security activities into the SDLC.

Which of the following activities **MUST** be mandated to ensure code quality from a security perspective? (Select TWO).

- A. Static and dynamic analysis is run as part of integration
- B. Security standards and training is performed as part of the project

- C. Daily stand-up meetings are held to ensure security requirements are understood
- D. For each major iteration penetration testing is performed
- E. Security requirements are story boarded and make it into the build
- F. A security design is performed at the end of the requirements phase

Correct Answer: AD

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 91

ABC Corporation uses multiple security zones to protect systems and information, and all of the VM hosts are part of a consolidated VM infrastructure. Each zone has different VM administrators. Which of the following restricts different zone administrators from directly accessing the console of a VM host from another zone?

- A. Ensure hypervisor layer firewalling between all VM hosts regardless of security zone.
- B. Maintain a separate virtual switch for each security zone and ensure VM hosts bind to only the correct virtual NIC(s).
- C. Organize VM hosts into containers based on security zone and restrict access using an ACL.
- D. Require multi-factor authentication when accessing the console at the physical VM host.

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 92

A security administrator has been asked to select a cryptographic algorithm to meet the criteria of a new application. The application utilizes streaming video that can be viewed both on computers and mobile devices. The application designers have asked that the algorithm support the transport encryption with the lowest possible performance overhead. Which of the following recommendations would BEST meet the needs of the application designers? (Select TWO).



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- A. Use AES in Electronic Codebook mode
- B. Use RC4 in Cipher Block Chaining mode
- C. Use RC4 with Fixed IV generation
- D. Use AES with cipher text padding
- E. Use RC4 with a nonce generated IV
- F. Use AES in Counter mode

Correct Answer: EF

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 93

ABC Company must achieve compliance for PCI and SOX. Which of the following would BEST allow the organization to achieve compliance and ensure security? (Select THREE).

- A. Establish a list of users that must work with each regulation
- B. Establish a list of devices that must meet each regulation
- C. Centralize management of all devices on the network
- D. Compartmentalize the network
- E. Establish a company framework
- F. Apply technical controls to meet compliance with the regulation

Correct Answer: BDF

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 94

A pentester must attempt to crack passwords on a windows domain that enforces strong complex passwords. Which of the following would crack the MOST passwords in the shortest time period?

- A. Online password testing
- B. Rainbow tables attack

- C. Dictionary attack
- D. Brute force attack

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 95

A security analyst, Ann, states that she believes Internet facing file transfer servers are being attacked. Which of the following is evidence that would aid Ann in making a case to management that action needs to be taken to safeguard these servers?

- A. Provide a report of all the IP addresses that are connecting to the systems and their locations
- B. Establish alerts at a certain threshold to notify the analyst of high activity
- C. Provide a report showing the file transfer logs of the servers
- D. Compare the current activity to the baseline of normal activity

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 96

A recently hired security administrator is advising developers about the secure integration of a legacy in-house application with a new cloud based processing system. The systems must exchange large amounts of fixed format data such as names, addresses, and phone numbers, as well as occasional chunks of data in unpredictable formats. The developers want to construct a new data format and create custom tools to parse and process the data. The security administrator instead suggests that the developers:

- A. Create a custom standard to define the data.
- B. Use well formed standard compliant XML and strict schemas.
- C. Only document the data format in the parsing application code.
- D. Implement a de facto corporate standard for all analyzed data.

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 97

A user is suspected of engaging in potentially illegal activities. Law enforcement has requested that the user continue to operate on the network as normal. However, they would like to have a copy of any communications from the user involving certain key terms. Additionally, the law enforcement agency has requested that the user's ongoing communication be retained in the user's account for future investigations. Which of the following will BEST meet the goals of law enforcement?

- A. Begin a chain-of-custody on for the user's communication. Next, place a legal hold on the user's email account.
- B. Perform an e-discover using the applicable search terms. Next, back up the user's email for a future investigation.
- C. Place a legal hold on the user's email account. Next, perform e-discovery searches to collect applicable emails.
- D. Perform a back up of the user's email account. Next, export the applicable emails that match the search terms.

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 98

An administrator has enabled salting for users' passwords on a UNIX box. A penetration tester must attempt to retrieve password hashes. Which of the following files must the penetration tester use to eventually obtain passwords on the system? (Select TWO).

- A. /etc/passwd
- B. /etc/shadow
- C. /etc/security
- D. /etc/password
- E. /sbin/logon
- F. /bin/bash

Correct Answer: AB

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 99

The latest independent research shows that cyber attacks involving SCADA systems grew an average of 15% per year in each of the last four years, but that this year's growth has slowed to around 7%. Over the same time period, the number of attacks against applications has decreased or stayed flat each year. At the start of the measure period, the incidence of PC boot loader or BIOS based attacks was negligible. Starting two years ago, the growth in the number of PC boot loader attacks has grown exponentially. Analysis of these trends would seem to suggest which of the following strategies should be employed?

- A. Spending on SCADA protections should stay steady; application control spending should increase substantially and spending on PC boot loader controls should increase substantially.
- B. Spending on SCADA security controls should stay steady; application control spending should decrease slightly and spending on PC boot loader protections should increase substantially.
- C. Spending all controls should increase by 15% to start; spending on application controls should be suspended, and PC boot loader protection research should increase by 100%.
- D. Spending on SCADA security controls should increase by 15%; application control spending should increase slightly, and spending on PC boot loader protections should remain steady.

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 100

Which of the following would be used in forensic analysis of a compromised Linux system? (Select THREE).

- A. Check log files for logins from unauthorized IPs.
- B. Check /proc/kmem for fragmented memory segments.
- C. Check for unencrypted passwords in /etc/shadow.
- D. Check timestamps for files modified around time of compromise.
- E. Use lsof to determine files with future timestamps.
- F. Use gpg to encrypt compromised data files.
- G. Verify the MD5 checksum of system binaries.
- H. Use vmstat to look for excessive disk I/O.

Correct Answer: ADG

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 101

The helpdesk is receiving multiple calls about slow and intermittent Internet access from the finance department. The following information is compiled:

Caller 1, IP 172.16.35.217, NETMASK 255.255.254.0

Caller 2, IP 172.16.35.53, NETMASK 255.255.254.0

Caller 3, IP 172.16.35.173, NETMASK 255.255.254.0

All callers are connected to the same switch and are routed by a router with five built-in interfaces. The upstream router interface's MAC is 00-01-42-32-ab-1a

A packet capture shows the following:

09:05:15.934840 arp reply 172.16.34.1 is-at 00:01:42:32:ab:1a (00:01:42:32:ab:1a)

09:06:16.124850 arp reply 172.16.34.1 is-at 00:01:42:32:ab:1a (00:01:42:32:ab:1a)

09:07:25.439811 arp reply 172.16.34.1 is-at 00:01:42:32:ab:1a (00:01:42:32:ab:1a)

09:08:10.937590 IP 172.16.35.1 > 172.16.35.255: ICMP echo request, id 2305, seq 1, length 65534

09:08:10.937591 IP 172.16.35.1 > 172.16.35.255: ICMP echo request, id 2306, seq 2, length 65534

09:08:10.937592 IP 172.16.35.1 > 172.16.35.255: ICMP echo request, id 2307, seq 3, length 65534

Which of the following is occurring on the network?

- A. A man-in-the-middle attack is underway on the network.
- B. An ARP flood attack is targeting at the router.
- C. The default gateway is being spoofed on the network.
- D. A denial of service attack is targeting at the router.

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 102

An organization recently upgraded its wireless infrastructure to support 802.1x and requires all clients to use this method. After the upgrade, several critical wireless clients fail to connect because they are only pre-shared key compliant. For the foreseeable future, none of the affected clients have an upgrade path to put them into compliance with the 802.1x requirement. Which of the following provides the MOST secure method of integrating the non-compliant clients into the network?

- A. Create a separate SSID and require the use of dynamic encryption keys.

- B. Create a separate SSID with a pre-shared key to support the legacy clients and rotate the key at random intervals.
- C. Create a separate SSID and pre-shared WPA2 key on a new network segment and only allow required communication paths.
- D. Create a separate SSID and require the legacy clients to connect to the wireless network using certificate-based 802.1x.

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 103

The following has been discovered in an internally developed application:

Error - Memory allocated but not freed:

```
char *myBuffer = malloc(BUFFER_SIZE);  
if (myBuffer != NULL) {  
    *myBuffer = STRING_WELCOME_MESSAGE;  
    printf("Welcome to: %s\n", myBuffer);  
}  
exit(0);
```

Which of the following security assessment methods are likely to reveal this security weakness? (Select TWO).

- A. Static code analysis
- B. Memory dumping
- C. Manual code review
- D. Application sandboxing
- E. Penetration testing
- F. Black box testing

Correct Answer: AC

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 104

A medical device manufacturer has decided to work with another international organization to develop the software for a new robotic surgical platform to be introduced into hospitals within the next 12 months. In order to ensure a competitor does not become aware, management at the medical device manufacturer has decided to keep it secret until formal contracts are signed. Which of the following documents is MOST likely to contain a description of the initial terms and arrangement and is not legally enforceable?

- A. OLA
- B. BPA
- C. SLA
- D. SOA
- E. MOU

Correct Answer: E

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 105

After the install process, a software application executed an online activation process. After a few months, the system experienced a hardware failure. A backup image of the system was restored on a newer revision of the same brand and model device. After the restore, the specialized application no longer works. Which of the following is the MOST likely cause of the problem?

- A. The binary files used by the application have been modified by malware.
- B. The application is unable to perform remote attestation due to blocked ports.
- C. The restored image backup was encrypted with the wrong key.
- D. The hash key summary of hardware and installed software no longer match.

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 106

A bank is in the process of developing a new mobile application. The mobile client renders content and communicates back to the company servers via REST/JSON calls. The bank wants to ensure that the communication is stateless between the mobile application and the web services gateway. Which of the following controls MUST be implemented to enable stateless communication?

- A. Generate a one-time key as part of the device registration process.
- B. Require SSL between the mobile application and the web services gateway.
- C. The jsession cookie should be stored securely after authentication.
- D. Authentication assertion should be stored securely on the client.

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 107

The network administrator at an enterprise reported a large data leak. One compromised server was used to aggregate data from several critical application servers and send it out to the Internet using HTTPS. Upon investigation, there have been no user logins over the previous week and the endpoint protection software is not reporting any issues. Which of the following BEST provides insight into where the compromised server collected the information?

- A. Review the flow data against each server's baseline communications profile.
- B. Configure the server logs to collect unusual activity including failed logins and restarted services.
- C. Correlate data loss prevention logs for anomalous communications from the server.
- D. Setup a packet capture on the firewall to collect all of the server communications.

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 108

Wireless users are reporting issues with the company's video conferencing and VoIP systems. The security administrator notices internal DoS attacks from infected PCs on the network causing the VoIP system to drop calls. The security administrator also notices that the SIP servers are unavailable during these attacks. Which of the following security controls will MOST likely mitigate the VoIP DoS attacks on the network? (Select TWO).

- A. Install a HIPS on the SIP servers
- B. Configure 802.1X on the network
- C. Update the corporate firewall to block attacking addresses
- D. Configure 802.11e on the network

E. Configure 802.1q on the network

Correct Answer: AD

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 109

During a new desktop refresh, all hosts are hardened at the OS level before deployment to comply with policy. Six months later, the company is audited for compliance to regulations. The audit discovers that 40 percent of the desktops do not meet requirements. Which of the following is the MOST likely cause of the noncompliance?

- A. The devices are being modified and settings are being overridden in production.
- B. The patch management system is causing the devices to be noncompliant after issuing the latest patches.
- C. The desktop applications were configured with the default username and password.
- D. 40 percent of the devices use full disk encryption.

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 110

A company that must comply with regulations is searching for a laptop encryption product to use for its 40,000 end points. The product must meet regulations but also be flexible enough to minimize overhead and support in regards to password resets and lockouts. Which of the following implementations would BEST meet the needs?



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- A. A partition-based software encryption product with a low-level boot protection and authentication
- B. A container-based encryption product that allows the end users to select which files to encrypt

- C. A full-disk hardware-based encryption product with a low-level boot protection and authentication
- D. A file-based encryption product using profiles to target areas on the file system to encrypt

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 111

A company decides to purchase commercially available software packages. This can introduce new security risks to the network. Which of the following is the BEST description of why this is true?

- A. Commercially available software packages are typically well known and widely available. Information concerning vulnerabilities and viable attack patterns are never revealed by the developer to avoid lawsuits.
- B. Commercially available software packages are often widely available. Information concerning vulnerabilities is often kept internal to the company that developed the software.
- C. Commercially available software packages are not widespread and are only available in limited areas. Information concerning vulnerabilities is often ignored by business managers.
- D. Commercially available software packages are well known and widely available. Information concerning vulnerabilities and viable attack patterns are always shared within the IT community.

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 112

A firm's Chief Executive Officer (CEO) is concerned that IT staff lacks the knowledge to identify complex vulnerabilities that may exist in a payment system being internally developed. The payment system being developed will be sold to a number of organizations and is in direct competition with another leading product. The CEO highlighted that code base confidentiality is of critical importance to allow the company to exceed the competition in terms of the product's reliability, stability, and performance. Which of the following would provide the MOST thorough testing and satisfy the CEO's requirements?

- A. Sign a MOU with a marketing firm to preserve the company reputation and use in-house resources for random testing.
- B. Sign a BPA with a small software consulting firm and use the firm to perform Black box testing and address all findings.
- C. Sign a NDA with a large security consulting firm and use the firm to perform Grey box testing and address all findings.

D. Use the most qualified and senior developers on the project to perform a variety of White box testing and code reviews.

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 113

Company policy requires that all unsupported operating systems be removed from the network. The security administrator is using a combination of network based tools to identify such systems for the purpose of disconnecting them from the network. Which of the following tools, or outputs from the tools in use, can be used to help the security administrator make an approximate determination of the operating system in use on the local company network? (Select THREE).

- A. Passive banner grabbing
- B. Password cracker
- C. `http://www.company.org/documents_private/index.php?search=string#&topic=windows&tcp=packet%20capture&cookie=wokdjwalkjcnie61lkasdf2aliser4`
- D. 443/tcp open http
- E. `dig host.company.com`
- F. `09:18:16.262743 IP (tos 0x0, ttl 64, id 9870, offset 0, flags [none], proto TCP (6), length 40) 192.168.1.3.1051 > 10.46.3.7.80: Flags [none], cksum 0x1800 (correct), win 512, length 0`
- G. Nmap

Correct Answer: AFG

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 114

A new IT company has hired a security consultant to implement a remote access system, which will enable employees to telecommute from home using both company issued as well as personal computing devices, including mobile devices. The company wants a flexible system to provide confidentiality and integrity for data in transit to the company's internally developed application GUI. Company policy prohibits employees from having administrative rights to company issued devices. Which of the following remote access solutions has the lowest technical complexity?

- A. RDP server
- B. Client-based VPN
- C. IPSec

- D. Jump box
- E. SSL VPN

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 115

The IT director has charged the company helpdesk with sanitizing fixed and removable media. The helpdesk manager has written a new procedure to be followed by the helpdesk staff. This procedure includes the current standard to be used for data sanitization, as well as the location of physical degaussing tools. In which of the following cases should the helpdesk staff use the new procedure? (Select THREE).

- A. During asset disposal
- B. While reviewing the risk assessment
- C. While deploying new assets
- D. Before asset repurposing
- E. After the media has been disposed of
- F. During the data classification process
- G. When installing new printers
- H. When media fails or is unusable

Correct Answer: ADH

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 116

Since the implementation of IPv6 on the company network, the security administrator has been unable to identify the users associated with certain devices utilizing IPv6 addresses, even when the devices are centrally managed.

```
en1: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    ether f8:1e:af:ab:10:a3
    inet6 fw80::fa1e:dfff:fee6:9d8%en1 prefixlen 64 scopeid 0x5
    inet 192.168.1.14 netmask 0xfffff00 broadcast 192.168.1.255
```

```
inet6 2001:200:5:922:1035:dfff:fee6:9dfe prefixlen 64 autoconf
inet6 2001:200:5:922:10ab:5e21:aa9a:6393 prefixlen 64 autoconf temporary
nd6 options=1<PERFORMNUD>
media: autoselect
status: active
```

Given this output, which of the following protocols is in use by the company and what can the system administrator do to positively map users with IPv6 addresses in the future? (Select TWO).

- A. The devices use EUI-64 format
- B. The routers implement NDP
- C. The network implements 6to4 tunneling
- D. The router IPv6 advertisement has been disabled
- E. The administrator must disable IPv6 tunneling
- F. The administrator must disable the mobile IPv6 router flag
- G. The administrator must disable the IPv6 privacy extensions
- H. The administrator must disable DHCPv6 option code 1

Correct Answer: BG

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 117

ABC Corporation has introduced token-based authentication to system administrators due to the risk of password compromise. The tokens have a set of HMAC counter-based codes and are valid until they are used. Which of the following types of authentication mechanisms does this statement describe?

- A. TOTP
- B. PAP
- C. CHAP
- D. HOTP

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 118

A security manager is looking into the following vendor proposal for a cloud-based SIEM solution. The intention is that the cost of the SIEM solution will be justified by having reduced the number of incidents and therefore saving on the amount spent investigating incidents.

Proposal:

External cloud-based software as a service subscription costing \$5,000 per month. Expected to reduce the number of current incidents per annum by 50%.

The company currently has ten security incidents per annum at an average cost of \$10,000 per incident. Which of the following is the ROI for this proposal after three years?

- A. -\$30,000
- B. \$120,000
- C. \$150,000
- D. \$180,000

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 119

A software developer and IT administrator are focused on implementing security in the organization to protect OSI layer 7. Which of the following security technologies would BEST meet their requirements? (Select TWO).

- A. NIPS
- B. HSM
- C. HIPS
- D. NIDS
- E. WAF

Correct Answer: CE

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 120

The finance department for an online shopping website has discovered that a number of customers were able to purchase goods and services without any payments. Further analysis conducted by the security investigations team indicated that the website allowed customers to update a payment amount for shipping. A specially crafted value could be entered and cause a roll over, resulting in the shipping cost being subtracted from the balance and in some instances resulted in a negative balance. As a result, the system processed the negative balance as zero dollars. Which of the following BEST describes the application issue?

- A. Race condition
- B. Click-jacking
- C. Integer overflow
- D. Use after free
- E. SQL injection

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 121

A bank has decided to outsource some existing IT functions and systems to a third party service provider. The third party service provider will manage the outsourced systems on their own premises and will continue to directly interface with the bank's other systems through dedicated encrypted links. Which of the following is critical to ensure the successful management of system security concerns between the two organizations?

- A. ISA
- B. BIA
- C. MOU
- D. SOA
- E. BPA

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 122

An investigator wants to collect the most volatile data first in an incident to preserve the data that runs the highest risk of being lost. After memory, which of the following BEST represents the remaining order of volatility that the investigator should follow?

- A. File system information, swap files, network processes, system processes and raw disk blocks.
- B. Raw disk blocks, network processes, system processes, swap files and file system information.
- C. System processes, network processes, file system information, swap files and raw disk blocks.
- D. Raw disk blocks, swap files, network processes, system processes, and file system information.

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 123

A security architect has been engaged during the implementation stage of the SDLC to review a new HR software installation for security gaps. With the project under a tight schedule to meet market commitments on project delivery, which of the following security activities should be prioritized by the security architect? (Select TWO).

- A. Perform penetration testing over the HR solution to identify technical vulnerabilities
- B. Perform a security risk assessment with recommended solutions to close off high-rated risks
- C. Secure code review of the HR solution to identify security gaps that could be exploited
- D. Perform access control testing to ensure that privileges have been configured correctly
- E. Determine if the information security standards have been complied with by the project

Correct Answer: BE

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 124

A company has noticed recently that its corporate information has ended up on an online forum. An investigation has identified that internal employees are sharing confidential corporate information on a daily basis. Which of the following are the MOST effective security controls that can be implemented to stop the above problem? (Select TWO).

- A. Implement a URL filter to block the online forum
- B. Implement NIDS on the desktop and DMZ networks
- C. Security awareness compliance training for all employees
- D. Implement DLP on the desktop, email gateway, and web proxies
- E. Review of security policies and procedures

Correct Answer: CD

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 125

An employee is performing a review of the organization's security functions and noticed that there is some cross over responsibility between the IT security team and the financial fraud team. Which of the following security documents should be used to clarify the roles and responsibilities between the teams?

- A. BPA
- B. BIA
- C. MOU
- D. OLA

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 126

A security services company is scoping a proposal with a client. They want to perform a general security audit of their environment within a two week period and consequently have the following requirements:

- Requirement 1 – Ensure their server infrastructure operating systems are at their latest patch levels
- Requirement 2 – Test the behavior between the application and database
- Requirement 3 – Ensure that customer data can not be exfiltrated

Which of the following is the BEST solution to meet the above requirements?



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- A. Penetration test, perform social engineering and run a vulnerability scanner
- B. Perform dynamic code analysis, penetration test and run a vulnerability scanner
- C. Conduct network analysis, dynamic code analysis, and static code analysis
- D. Run a protocol analyzer perform static code analysis and vulnerability assessment

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 127

An insurance company has an online quoting system for insurance premiums. It allows potential customers to fill in certain details about their car and obtain a quote. During an investigation, the following patterns were detected:

Pattern 1 – Analysis of the logs identifies that insurance premium forms are being filled in but only single fields are incrementally being updated.

Pattern 2 – For every quote completed, a new customer number is created; due to legacy systems, customer numbers are running out.

Which of the following is the attack type the system is susceptible to, and what is the BEST way to defend against it? (Select TWO).

- A. Apply a hidden field that triggers a SIEM alert
- B. Cross site scripting attack
- C. Resource exhaustion attack
- D. Input a blacklist of all known BOT malware IPs into the firewall
- E. SQL injection
- F. Implement an inline WAF and integrate into SIEM
- G. Distributed denial of service
- H. Implement firewall rules to block the attacking IP addresses

Correct Answer: CF

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 128

A security tester is testing a website and performs the following manual query:
`https://www.comptia.com/cookies.jsp?products=5%20and%201=1`

The following response is received in the payload:
"ORA-000001: SQL command not properly ended"

Which of the following is the response an example of?

- A. Fingerprinting
- B. Cross-site scripting
- C. SQL injection
- D. Privilege escalation

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 129

An organization has several production critical SCADA supervisory systems that cannot follow the normal 30-day patching policy. Which of the following BEST maximizes the protection of these systems from malicious software?

- A. Configure a firewall with deep packet inspection that restricts traffic to the systems
- B. Configure a separate zone for the systems and restrict access to known ports
- C. Configure the systems to ensure only necessary applications are able to run
- D. Configure the host firewall to ensure only the necessary applications have listening ports

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 130

An administrator believes that the web servers are being flooded with excessive traffic from time to time. The administrator suspects that these traffic floods correspond to when a competitor makes major announcements. Which of the following should the administrator do to prove this theory?

- A. Implement data analytics to try and correlate the occurrence times.
- B. Implement a honey pot to capture traffic during the next attack.
- C. Configure the servers for high availability to handle the additional bandwidth.
- D. Log all traffic coming from the competitor's public IP addresses.

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 131

A trucking company delivers products all over the country. The executives at the company would like to have better insight into the location of their drivers to ensure the shipments are following secure routes. Which of the following would BEST help the executives meet this goal?

- A. Install GSM tracking on each product for end-to-end delivery visibility.
- B. Implement geo-fencing to track products.
- C. Require drivers to geo-tag documentation at each delivery location.
- D. Equip each truck with an RFID tag for location services.

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 132

A company has adopted a BYOD program. The company would like to protect confidential information. However, it has been decided that when an employee leaves, the company will not completely wipe the personal device. Which of the following would MOST likely help the company maintain security when employees leave?

- A. Require cloud storage on corporate servers and disable access upon termination
- B. Whitelist access to only non-confidential information
- C. Utilize an MDM solution with containerization
- D. Require that devices not have local storage

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 133

An organization uses IP address block 203.0.113.0/24 on its internal network. At the border router, the network administrator sets up rules to deny packets with a source address in this subnet from entering the network, and to deny packets with a destination address in this subnet from leaving the network. Which of the following is the administrator attempting to prevent?

- A. BGP route hijacking attacks
- B. Bogon IP network traffic
- C. IP spoofing attacks
- D. Man-in-the-middle attacks
- E. Amplified DDoS attacks

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 134

Using SSL, an administrator wishes to secure public facing server farms in three subdomains: dc1.east.company.com, dc2.central.company.com, and dc3.west.company.com. Which of the following is the number of wildcard SSL certificates that should be purchased?

- A. 0
- B. 1
- C. 3
- D. 6

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 135

A security administrator is assessing a new application. The application uses an API that is supposed to encrypt text strings that are stored in memory. How might the administrator test that the strings are indeed encrypted in memory?

- A. Use fuzzing techniques to examine application inputs
- B. Run nmap to attach to application memory
- C. Use a packet analyzer to inspect the strings
- D. Initiate a core dump of the application
- E. Use an HTTP interceptor to capture the text strings

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 136

An international shipping company discovered that deliveries left idle are being tampered with. The company wants to reduce the idle time associated with international deliveries by ensuring that personnel are automatically notified when an inbound delivery arrives at the transit dock. Which of the following should be implemented to help the company increase the security posture of its operations?

- A. Back office database
- B. Asset tracking
- C. Geo-fencing
- D. Barcode scanner

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 137

The telecommunications manager wants to improve the process for assigning company-owned mobile devices and ensuring data is properly removed when no longer needed. Additionally, the manager wants to onboard and offboard personally owned mobile devices that will be used in the BYOD initiative. Which of the following should be implemented to ensure these processes can be automated? (Select THREE).

- A. SIM's PIN
- B. Remote wiping
- C. Chargeback system
- D. MDM software
- E. Presence software
- F. Email profiles
- G. Identity attestation
- H. GPS tracking

Correct Answer: BDG

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 138

The risk manager at a small bank wants to use quantitative analysis to determine the ALE of running a business system at a location which is subject to fires during the year. A risk analyst reports to the risk manager that the asset value of the business system is \$120,000 and, based on industry data, the exposure factor to fires is only 20% due to the fire suppression system installed at the site. Fires occur in the area on average every four years. Which of the following is the ALE?

- A. \$6,000
- B. \$24,000
- C. \$30,000
- D. \$96,000

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 139

An accountant at a small business is trying to understand the value of a server to determine if the business can afford to buy another server for DR. The risk manager only provided the accountant with the SLE of \$24,000, ARO of 20% and the exposure factor of 25%. Which of the following is the correct asset value calculated by the accountant?

- A. \$4,800
- B. \$24,000
- C. \$96,000
- D. \$120,000

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 140

A risk manager has decided to use likelihood and consequence to determine the risk of an event occurring to a company asset. Which of the following is a limitation of this approach to risk management?

- A. Subjective and based on an individual's experience.
- B. Requires a high degree of upfront work to gather environment details.
- C. Difficult to differentiate between high, medium, and low risks.
- D. Allows for cost and benefit analysis.
- E. Calculations can be extremely complex to manage.

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 141

An administrator is implementing a new network-based storage device. In selecting a storage protocol, the administrator would like the data in transit's integrity to be the most important concern. Which of the following protocols meets these needs by implementing either AES-CMAC or HMAC-SHA256 to sign data?

- A. SMB
- B. NFS
- C. FCoE
- D. iSCSI

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 142

A security administrator is tasked with increasing the availability of the storage networks while enhancing the performance of existing applications. Which of the following technologies should the administrator implement to meet these goals? (Select TWO).

- A. LUN masking
- B. Snapshots
- C. vSAN
- D. Dynamic disk pools
- E. Multipath
- F. Deduplication

Correct Answer: DE

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 143

A system administrator has just installed a new Linux distribution. The distribution is configured to be “secure out of the box”. The system administrator cannot

make updates to certain system files and services. Each time changes are attempted, they are denied and a system error is generated. Which of the following troubleshooting steps should the security administrator suggest?

- A. Review settings in the SELinux configuration files
- B. Reset root permissions on systemd files
- C. Perform all administrative actions while logged in as root
- D. Disable any firewall software before making changes

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 144

A security solutions architect has argued consistently to implement the most secure method of encrypting corporate messages. The solution has been derided as not being cost effective by other members of the IT department. The proposed solution uses symmetric keys to encrypt all messages and is very resistant to unauthorized decryption. The method also requires special handling and security for all key material that goes above and beyond most encryption systems.

Which of the following is the solutions architect MOST likely trying to implement?

- A. One time pads
- B. PKI
- C. Quantum cryptography
- D. Digital rights management

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 145

A critical system audit shows that the payroll system is not meeting security policy due to missing OS security patches. Upon further review, it appears that the system is not being patched at all. The vendor states that the system is only supported on the current OS patch level. Which of the following compensating controls should be used to mitigate the vulnerability of missing OS patches on this system?

- A. Isolate the system on a secure network to limit its contact with other systems
- B. Implement an application layer firewall to protect the payroll system interface
- C. Monitor the system's security log for unauthorized access to the payroll application
- D. Perform reconciliation of all payroll transactions on a daily basis

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 146

ODBC access to a database on a network-connected host is required. The host does not have a security mechanism to authenticate the incoming ODBC connection, and the application requires that the connection have read/write permissions. In order to further secure the data, a nonstandard configuration would need to be implemented. The information in the database is not sensitive, but was not readily accessible prior to the implementation of the ODBC connection. Which of the following actions should be taken by the security analyst?

- A. Accept the risk in order to keep the system within the company's standard security configuration.
- B. Explain the risks to the data owner and aid in the decision to accept the risk versus choosing a nonstandard solution.
- C. Secure the data despite the need to use a security control or solution that is not within company standards.
- D. Do not allow the connection to be made to avoid unnecessary risk and avoid deviating from the standard security configuration.

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 147

A project manager working for a large city government is required to plan and build a WAN, which will be required to host official business and public access. It is also anticipated that the city's emergency and first response communication systems will be required to operate across the same network. The project manager has experience with enterprise IT projects, but feels this project has an increased complexity as a result of the mixed business / public use and the critical infrastructure it will provide. Which of the following should the project manager release to the public, academia, and private industry to ensure the city provides due care in considering all project factors prior to building its new WAN?

- A. NDA
- B. RFI

- C. RFP
- D. RFQ

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 148

In a situation where data is to be recovered from an attacker's location, which of the following are the FIRST things to capture? (Select TWO).

- A. Removable media
- B. Passwords written on scrap paper
- C. Snapshots of data on the monitor
- D. Documents on the printer
- E. Volatile system memory
- F. System hard drive

Correct Answer: CE

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 149

An information security assessor for an organization finished an assessment that identified critical issues with the human resource new employee management software application. The assessor submitted the report to senior management but nothing has happened. Which of the following would be a logical next step?

- A. Meet the two key VPs and request a signature on the original assessment.
- B. Include specific case studies from other organizations in an updated report.
- C. Schedule a meeting with key human resource application stakeholders.
- D. Craft an RFP to begin finding a new human resource application.

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 150

An IT Manager is concerned about errors made during the deployment process for a new model of tablet. Which of the following would suggest best practices and configuration parameters that technicians could follow during the deployment process?

- A. Automated workflow
- B. Procedure
- C. Corporate standard
- D. Guideline
- E. Policy

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 151

An IT manager is concerned about the cost of implementing a web filtering solution in an effort to mitigate the risks associated with malware and resulting data leakage. Given that the ARO is twice per year, the ALE resulting from a data leak is \$25,000 and the ALE after implementing the web filter is \$15,000. The web filtering solution will cost the organization \$10,000 per year. Which of the following values is the single loss expectancy of a data leakage event after implementing the web filtering solution?

- A. \$0
- B. \$7,500
- C. \$10,000
- D. \$12,500
- E. \$15,000

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 152

An IT manager is working with a project manager to implement a new ERP system capable of transacting data between the new ERP system and the legacy system. As part of this process, both parties must agree to the controls utilized to secure data connections between the two enterprise systems. This is commonly documented in which of the following formal documents?

- A. Memorandum of Understanding
- B. Information System Security Agreement
- C. Interconnection Security Agreement
- D. Interoperability Agreement
- E. Operating Level Agreement

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 153

A facilities manager has observed varying electric use on the company's metered service lines. The facility management rarely interacts with the IT department unless new equipment is being delivered. However, the facility manager thinks that there is a correlation between spikes in electric use and IT department activity. Which of the following business processes and/or practices would provide better management of organizational resources with the IT department's needs? (Select TWO).

- A. Deploying a radio frequency identification tagging asset management system
- B. Designing a business resource monitoring system
- C. Hiring a property custodian
- D. Purchasing software asset management software
- E. Facility management participation on a change control board
- F. Rewriting the change board charter
- G. Implementation of change management best practices

Correct Answer: EG

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 154

A company has a difficult time communicating between the security engineers, application developers, and sales staff. The sales staff tends to overpromise the application deliverables. The security engineers and application developers are falling behind schedule. Which of the following should be done to solve this?

- A. Allow the sales staff to shadow the developers and engineers to see how their sales impact the deliverables.
- B. Allow the security engineering team to do application development so they understand why it takes so long.
- C. Allow the application developers to attend a sales conference so they understand how business is done.
- D. Allow the sales staff to learn application programming and security engineering so they understand the whole lifecycle.

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 155

The DLP solution has been showing some unidentified encrypted data being sent using FTP to a remote server. A vulnerability scan found a collection of Linux servers that are missing OS level patches. Upon further investigation, a technician notices that there are a few unidentified processes running on a number of the servers. What would be a key FIRST step for the data security team to undertake at this point?

- A. Capture process ID data and submit to anti-virus vendor for review.
- B. Reboot the Linux servers, check running processes, and install needed patches.
- C. Remove a single Linux server from production and place in quarantine.
- D. Notify upper management of a security breach.
- E. Conduct a bit level image, including RAM, of one or more of the Linux servers.

Correct Answer: E

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 156

Customers have recently reported incomplete purchase history and other anomalies while accessing their account history on the web server farm. Upon investigation, it has been determined that there are version mismatches of key e-commerce applications on the production web servers. The development team has

direct access to the production servers and is most likely the cause of the different release versions. Which of the following process level solutions would address this problem?



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- A. Implement change control practices at the organization level.
- B. Adjust the firewall ACL to prohibit development from directly accessing the production server farm.
- C. Update the vulnerability management plan to address data discrepancy issues.
- D. Change development methodology from strict waterfall to agile.

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 157

A senior network security engineer has been tasked to decrease the attack surface of the corporate network. Which of the following actions would protect the external network interfaces from external attackers performing network scanning?

- A. Remove contact details from the domain name registrar to prevent social engineering attacks.
- B. Test external interfaces to see how they function when they process fragmented IP packets.
- C. Enable a honeynet to capture and facilitate future analysis of malicious attack vectors.
- D. Filter all internal ICMP message traffic, forcing attackers to use full-blown TCP port scans against external network interfaces.

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 158

In an effort to minimize costs, the management of a small candy company wishes to explore a cloud service option for the development of its online applications.

The company does not wish to invest heavily in IT infrastructure. Which of the following solutions should be recommended?

- A. A public IaaS
- B. A public PaaS
- C. A public SaaS
- D. A private SaaS
- E. A private IaaS
- F. A private PaaS

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 159

An educational institution would like to make computer labs available to remote students. The labs are used for various IT networking, security, and programming courses. The requirements are:

1. Each lab must be on a separate network segment.
2. Labs must have access to the Internet, but not other lab networks.
3. Student devices must have network access, not simple access to hosts on the lab networks.
4. Students must have a private certificate installed before gaining access.
5. Servers must have a private certificate installed locally to provide assurance to the students.
6. All students must use the same VPN connection profile.

Which of the following components should be used to achieve the design in conjunction with directory services?

- A. L2TP VPN over TLS for remote connectivity, SAML for federated authentication, firewalls between each lab segment
- B. SSL VPN for remote connectivity, directory services groups for each lab group, ACLs on routing equipment
- C. IPSec VPN with mutual authentication for remote connectivity, RADIUS for authentication, ACLs on network equipment
- D. Cloud service remote access tool for remote connectivity, OAuth for authentication, ACL on routing equipment

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 160

A small company is developing a new Internet-facing web application. The security requirements are:

1. Users of the web application must be uniquely identified and authenticated.
2. Users of the web application will not be added to the company's directory services.
3. Passwords must not be stored in the code.

Which of the following meets these requirements?

- A. Use OpenID and allow a third party to authenticate users.
- B. Use TLS with a shared client certificate for all users.
- C. Use SAML with federated directory services.
- D. Use Kerberos and browsers that support SAML.

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 161

A company is trying to decide how to manage hosts in a branch location connected via a slow WAN link. The company desires to provide the same level of performance and functionality to the branch office as it provides to the main campus. The company uses Active Directory for its directory service and host configuration management. The branch location does not have a datacenter, and the physical security posture of the building is weak. Which of the following designs is MOST appropriate for this scenario?

- A. Deploy a branch location Read-Only Domain Controller in the DMZ at the main campus with a two-way trust.
- B. Deploy a corporate Read-Only Domain Controller to the branch location.
- C. Deploy a corporate Domain Controller in the DMZ at the main campus.
- D. Deploy a branch location Read-Only Domain Controller to the branch office location with a one-way trust.
- E. Deploy a corporate Domain Controller to the branch location.
- F. Deploy a branch location Domain Controller to the branch location with a one-way trust.

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 162

A multi-national company has a highly mobile workforce and minimal IT infrastructure. The company utilizes a BYOD and social media policy to integrate presence technology into global collaboration tools by individuals and teams. As a result of the dispersed employees and frequent international travel, the company is concerned about the safety of employees and their families when moving in and out of certain countries. Which of the following could the company view as a downside of using presence technology?

- A. Insider threat
- B. Network reconnaissance
- C. Physical security
- D. Industrial espionage

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 163

A finance manager says that the company needs to ensure that the new system can “replay” data, up to the minute, for every exchange being tracked by the investment departments. The finance manager also states that the company’s transactions need to be tracked against this data for a period of five years for compliance. How would a security engineer BEST interpret the finance manager’s needs?

- A. Compliance standards
- B. User requirements
- C. Data elements
- D. Data storage
- E. Acceptance testing
- F. Information digest
- G. System requirements

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 164

An IT manager is working with a project manager from another subsidiary of the same multinational organization. The project manager is responsible for a new software development effort that is being outsourced overseas, while customer acceptance testing will be performed in house. Which of the following capabilities is MOST likely to cause issues with network availability?

- A. Source code vulnerability scanning
- B. Time-based access control lists
- C. ISP to ISP network jitter
- D. File-size validation
- E. End to end network encryption

Correct Answer: B

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 165

The IT Security Analyst for a small organization is working on a customer's system and identifies a possible intrusion in a database that contains PII. Since PII is involved, the analyst wants to get the issue addressed as soon as possible. Which of the following is the FIRST step the analyst should take in mitigating the impact of the potential intrusion?

- A. Contact the local authorities so an investigation can be started as quickly as possible.
- B. Shut down the production network interfaces on the server and change all of the DBMS account passwords.
- C. Disable the front-end web server and notify the customer by email to determine how the customer would like to proceed.
- D. Refer the issue to management for handling according to the incident response process.

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 166

The Chief Information Security Officer (CISO) at a large organization has been reviewing some security-related incidents at the organization and comparing them to current industry trends. The desktop security engineer feels that the use of USB storage devices on office computers has contributed to the frequency of security

incidents. The CISO knows the acceptable use policy prohibits the use of USB storage devices. Every user receives a popup warning about this policy upon login. The SIEM system produces a report of USB violations on a monthly basis; yet violations continue to occur. Which of the following preventative controls would MOST effectively mitigate the logical risks associated with the use of USB storage devices?

- A. Revise the corporate policy to include possible termination as a result of violations
- B. Increase the frequency and distribution of the USB violations report
- C. Deploy PKI to add non-repudiation to login sessions so offenders cannot deny the offense
- D. Implement group policy objects

Correct Answer: D

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 167

Company XYZ finds itself using more cloud-based business tools, and password management is becoming onerous. Security is important to the company; as a result, password replication and shared accounts are not acceptable. Which of the following implementations addresses the distributed login with centralized authentication and has wide compatibility among SaaS vendors?

- A. Establish a cloud-based authentication service that supports SAML.
- B. Implement a new Diameter authentication server with read-only attestation.
- C. Install a read-only Active Directory server in the corporate DMZ for federation.
- D. Allow external connections to the existing corporate RADIUS server.

Correct Answer: A

Section: Mixed Questions

Explanation

Explanation/Reference:



QUESTION 168

A network engineer wants to deploy user-based authentication across the company's wired and wireless infrastructure at layer 2 of the OSI model. Company policies require that users be centrally managed and authenticated and that each user's network access be controlled based on the user's role within the company. Additionally, the central authentication system must support hierarchical trust and the ability to natively authenticate mobile devices and workstations. Which of the following are needed to implement these requirements? (Select TWO).

- A. SAML
- B. WAYF
- C. LDAP
- D. RADIUS
- E. Shibboleth
- F. PKI

Correct Answer: CD

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 169

A company Chief Information Officer (CIO) is unsure which set of standards should govern the company's IT policy. The CIO has hired consultants to develop use cases to test against various government and industry security standards. The CIO is convinced that there is large overlap between the configuration checks and security controls governing each set of standards. Which of the following selections represent the BEST option for the CIO?

- A. Issue a RFQ for vendors to quote a complete vulnerability and risk management solution to the company.
- B. Issue a policy that requires only the most stringent security standards be implemented throughout the company.
- C. Issue a policy specifying best practice security standards and a baseline to be implemented across the company.
- D. Issue a RFI for vendors to determine which set of security standards is best for the company.

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 170

A security administrator was recently hired in a start-up company to represent the interest of security and to assist the network team in improving security in the

company. The programmers are not on good terms with the security team and do not want to be distracted with security issues while they are working on a major project. Which of the following is the BEST time to make them address security issues in the project?

- A. In the middle of the project
- B. At the end of the project
- C. At the inception of the project
- D. At the time they request

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 171

A well-known retailer has experienced a massive credit card breach. The retailer had gone through an audit and had been presented with a potential problem on their network. Vendors were authenticating directly to the retailer's AD servers, and an improper firewall rule allowed pivoting from the AD server to the DMZ where credit card servers were kept. The firewall rule was needed for an internal application that was developed, which presents risk. The retailer determined that because the vendors were required to have site to site VPN's no other security action was taken.

To prove to the retailer the monetary value of this risk, which of the following type of calculations is needed?

- A. Residual Risk calculation
- B. A cost/benefit analysis
- C. Quantitative Risk Analysis
- D. Qualitative Risk Analysis

Correct Answer: C

Section: Mixed Questions

Explanation

Explanation/Reference:

QUESTION 172

SIMULATION

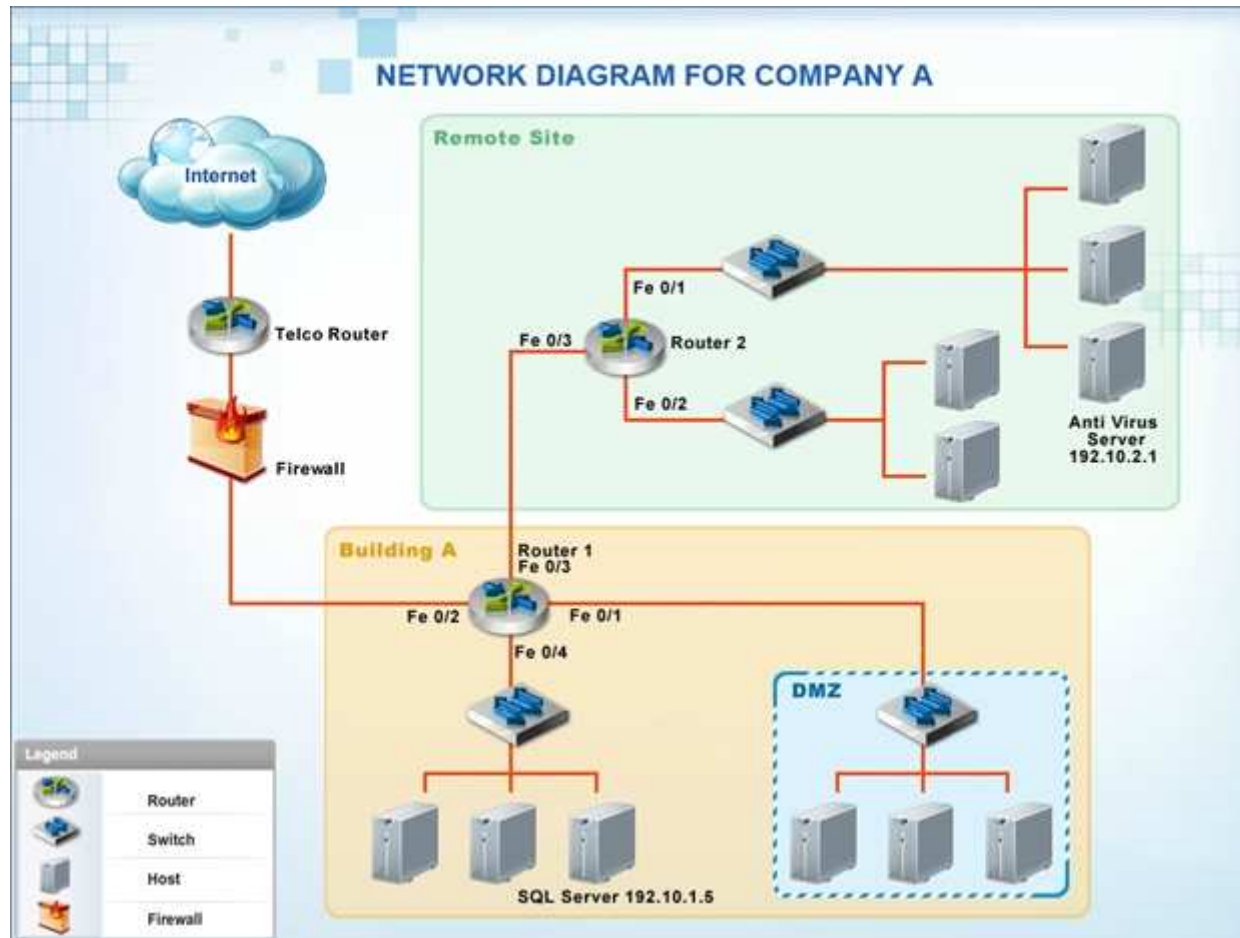
Company A has noticed abnormal behavior targeting their SQL server on the network from a rogue IP address. The company uses the following internal IP address ranges: 192.10.1.0/24 for the corporate site and 192.10.2.0/24 for the remote site. The Telco router interface uses the 192.10.5.0/30 IP range.

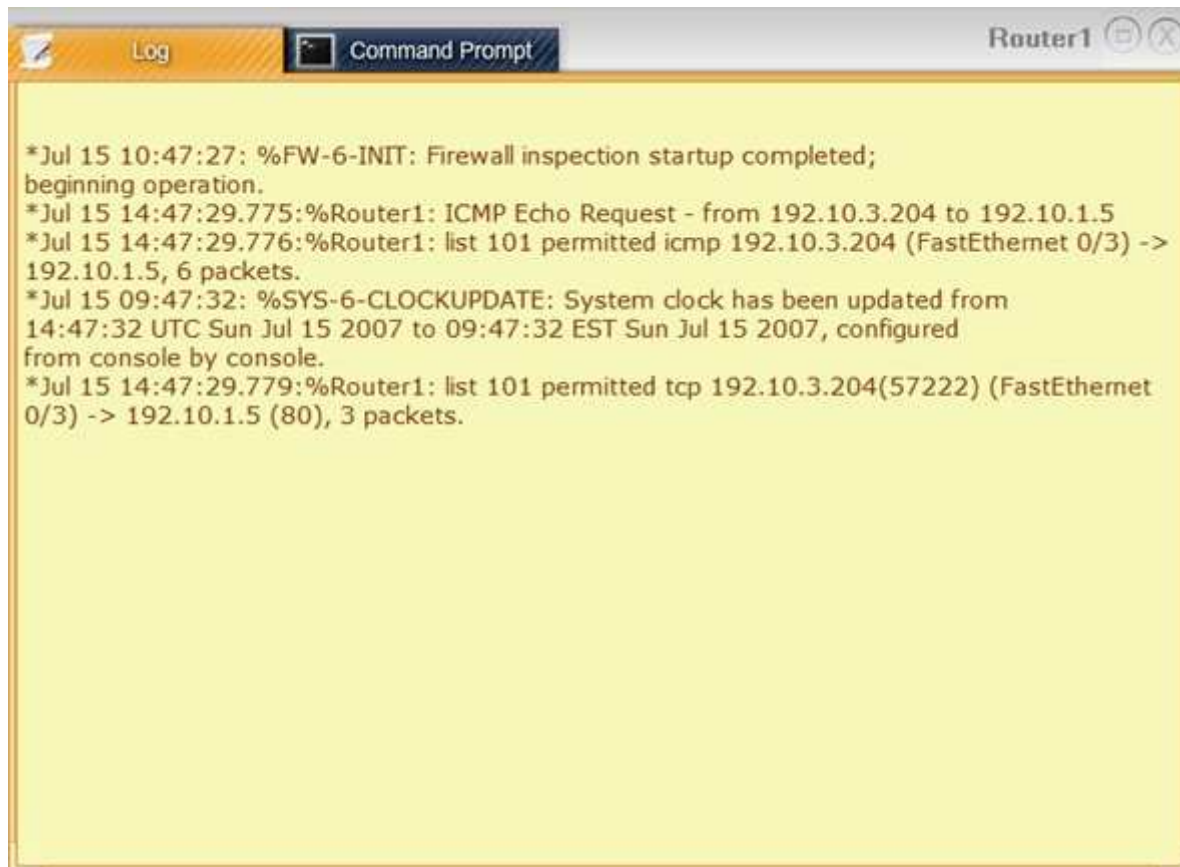
Instructions: Click on the simulation button to refer to the Network Diagram for Company A.

Click on Router 1, Router 2, and the Firewall to evaluate and configure each device.

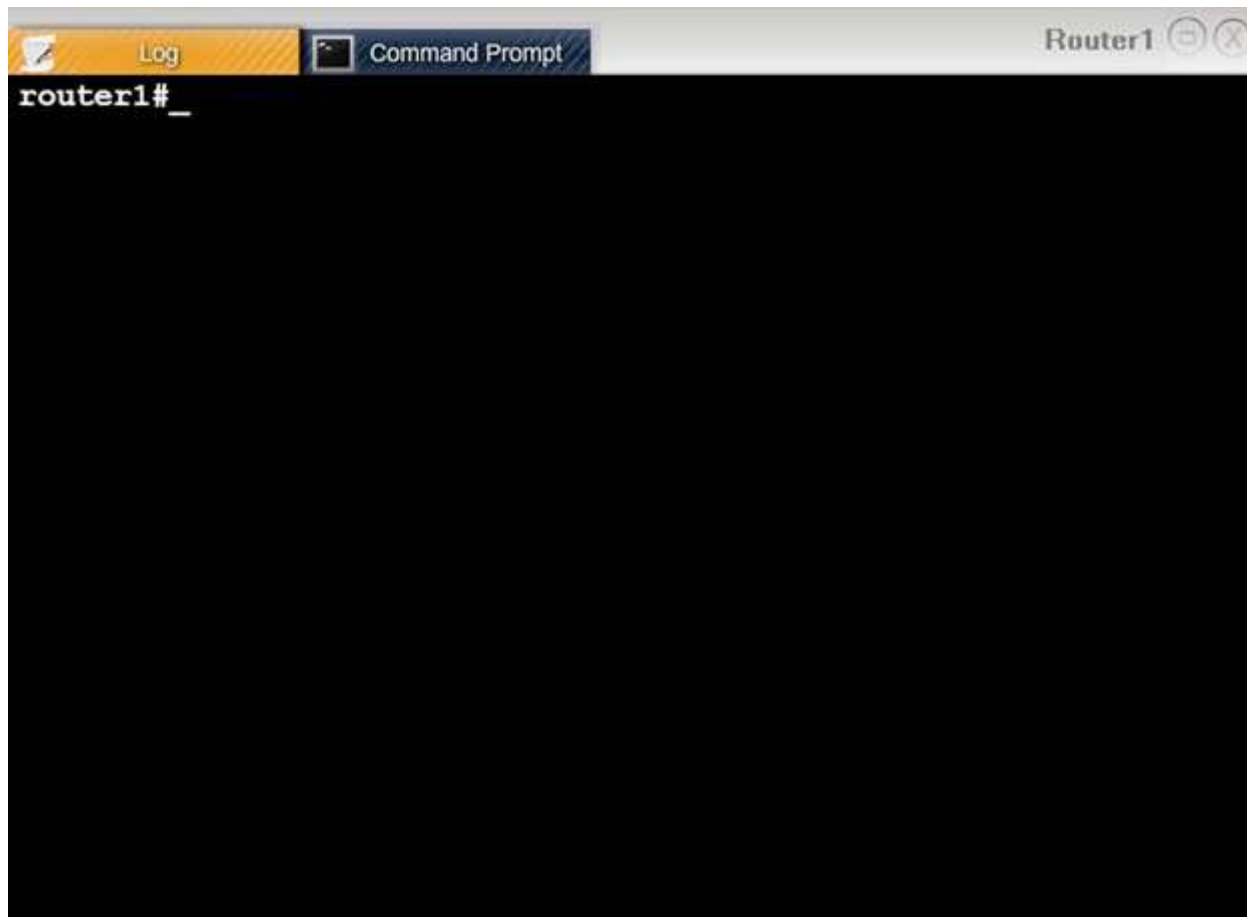
Task 1: Display and examine the logs and status of Router 1, Router 2, and Firewall interfaces.

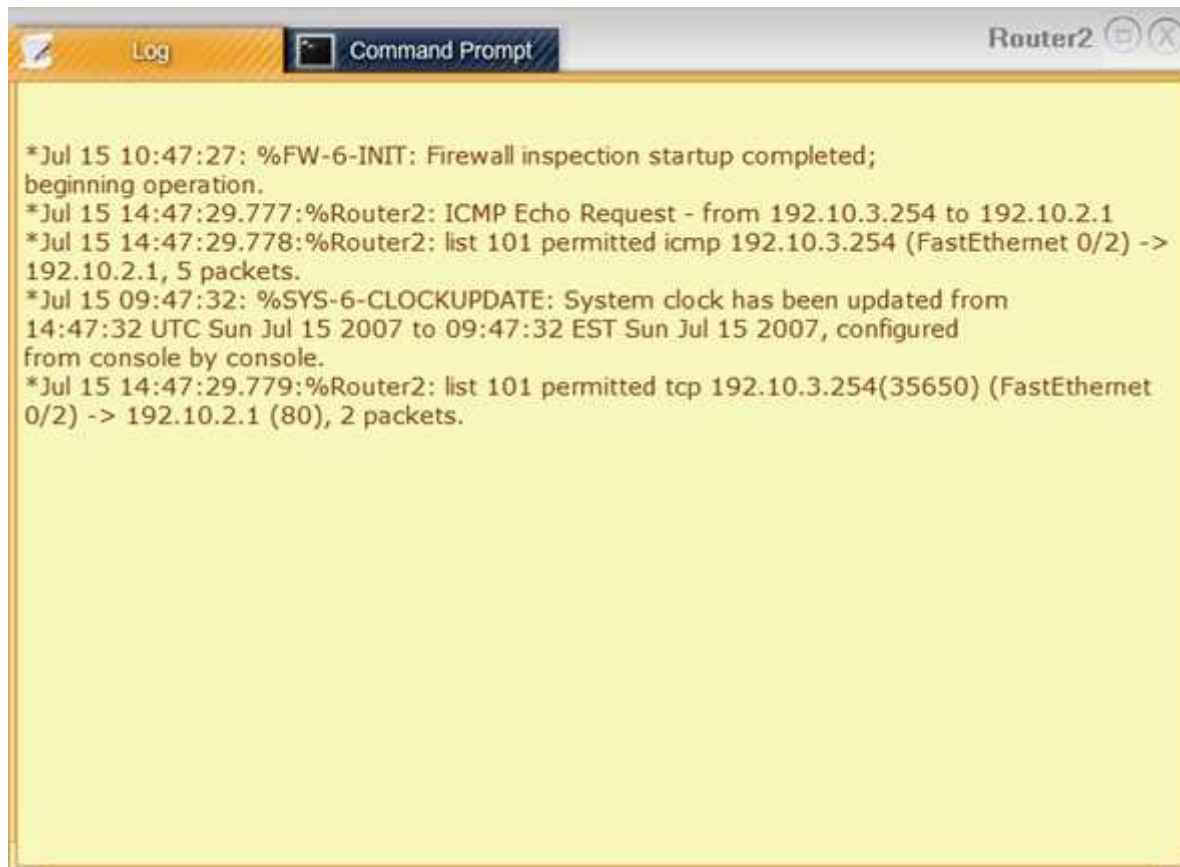
Task 2: Reconfigure the appropriate devices to prevent the attacks from continuing to target the SQL server and other servers on the corporate network.





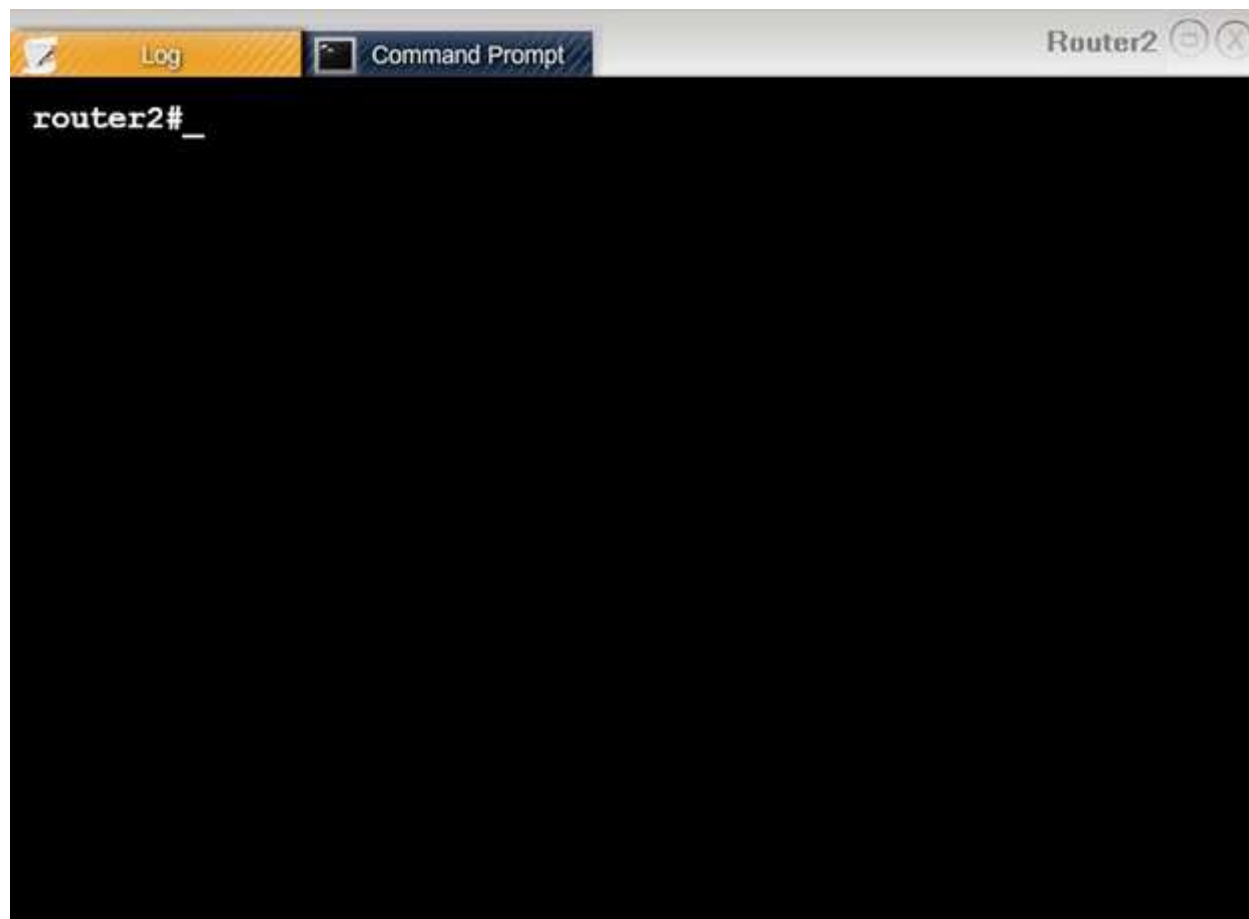
```
*Jul 15 10:47:27: %FW-6-INIT: Firewall inspection startup completed;
beginning operation.
*Jul 15 14:47:29.775: %Router1: ICMP Echo Request - from 192.10.3.204 to 192.10.1.5
*Jul 15 14:47:29.776: %Router1: list 101 permitted icmp 192.10.3.204 (FastEthernet 0/3) ->
192.10.1.5, 6 packets.
*Jul 15 09:47:32: %SYS-6-CLOCKUPDATE: System clock has been updated from
14:47:32 UTC Sun Jul 15 2007 to 09:47:32 EST Sun Jul 15 2007, configured
from console by console.
*Jul 15 14:47:29.779: %Router1: list 101 permitted tcp 192.10.3.204(57222) (FastEthernet
0/3) -> 192.10.1.5 (80), 3 packets.
```

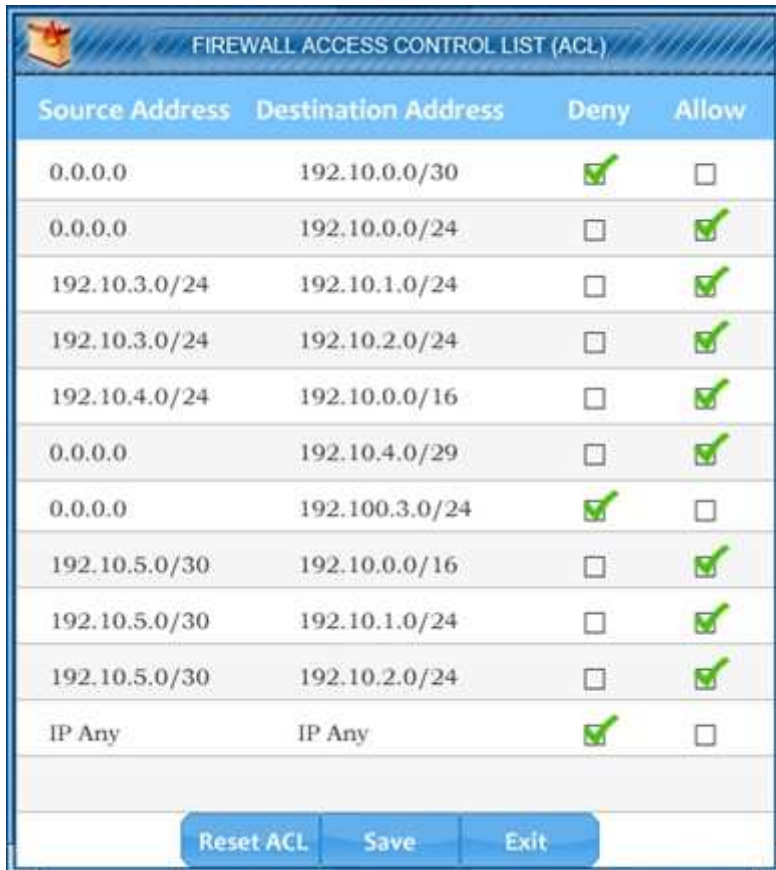





The screenshot shows a Cisco Router2 Command Prompt window. The title bar includes a 'Log' button, a 'Command Prompt' button, and the router name 'Router2' with standard window controls. The main area displays several log messages:

```
*Jul 15 10:47:27: %FW-6-INIT: Firewall inspection startup completed;  
beginning operation.  
*Jul 15 14:47:29.777: %Router2: ICMP Echo Request - from 192.10.3.254 to 192.10.2.1  
*Jul 15 14:47:29.778: %Router2: list 101 permitted icmp 192.10.3.254 (FastEthernet 0/2) ->  
192.10.2.1, 5 packets.  
*Jul 15 09:47:32: %SYS-6-CLOCKUPDATE: System clock has been updated from  
14:47:32 UTC Sun Jul 15 2007 to 09:47:32 EST Sun Jul 15 2007, configured  
from console by console.  
*Jul 15 14:47:29.779: %Router2: list 101 permitted tcp 192.10.3.254(35650) (FastEthernet  
0/2) -> 192.10.2.1 (80), 2 packets.
```





The image shows a 'FIREWALL ACCESS CONTROL LIST (ACL)' configuration window. It contains a table with four columns: 'Source Address', 'Destination Address', 'Deny', and 'Allow'. There are 11 rows of configuration. The 'Deny' and 'Allow' columns contain checkboxes, some of which are checked with a green checkmark. At the bottom of the window are three buttons: 'Reset ACL', 'Save', and 'Exit'.

Source Address	Destination Address	Deny	Allow
0.0.0.0	192.10.0.0/30	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0.0.0.0	192.10.0.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.3.0/24	192.10.1.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.3.0/24	192.10.2.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.4.0/24	192.10.0.0/16	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0.0.0.0	192.10.4.0/29	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0.0.0.0	192.100.3.0/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
192.10.5.0/30	192.10.0.0/16	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.5.0/30	192.10.1.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.5.0/30	192.10.2.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IP Any	IP Any	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Reset ACL Save Exit

Correct Answer: Please check the explanation part for the solution.


Section: Mixed Questions

Explanation

Explanation/Reference:

Explanation:

We need to select the exactly the same to configure and then click on Save as shown below image.


FIREWALL ACCESS CONTROL LIST (ACL)

Source Address	Destination Address	Deny	Allow
0.0.0.0	192.10.0.0/30	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0.0.0.0	192.10.0.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.3.0/24	192.10.1.0/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
192.10.3.0/24	192.10.2.0/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
192.10.4.0/24	192.10.0.0/16	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0.0.0.0	192.10.4.0/29	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0.0.0.0	192.100.3.0/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
192.10.5.0/30	192.10.0.0/16	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.5.0/30	192.10.1.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.5.0/30	192.10.2.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IP Any	IP Any	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Reset ACL
Save
Exit