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**Exam Code: 312-49**  
**Exam Name: Computer Hacking Forensic Investigator**



**Exam A**

**QUESTION 1**

You are working on a thesis for your doctorate degree in Computer Science. Your thesis is based on HTML, DHTML, and other web-based languages and how they have evolved over the years. You navigate to archive.org and view the HTML code of news.com. You then navigate to the current news.com website and copy over the source code. While searching through the code, you come across something abnormal: What have you found?

- A. Web bug
- B. CGI code
- C. Trojan.downloader
- D. Blind bug

**Correct Answer: A**

**Section:**

**QUESTION 2**

You are using DriveSpy, a forensic tool and want to copy 150 sectors where the starting sector is 1709 on the primary hard drive. Which of the following formats correctly specifies these sectors?

- A. 0:1000, 150
- B. 0:1709, 150
- C. 1:1709, 150
- D. 0:1709-1858

**Correct Answer: B**

**Section:**

**QUESTION 3**

A honey pot deployed with the IP 172.16.1.108 was compromised by an attacker. Given below is an excerpt from a Snort binary capture of the attack. Decipher the activity carried out by the attacker by studying the log. Please note that you are required to infer only what is explicit in the excerpt.

(Note: The student is being tested on concepts learnt during passive OS fingerprinting, basic TCP/IP connection concepts and the ability to read packet signatures from a sniff dump.)

```
03/15-20:21:24.107053 211.185.125.124:3500 -> 172.16.1.108:111
TCP TTL:43 TOS:0x0 ID:29726 IpLen:20 DgmLen:52 DF
***A*** Seq: 0x9B6338C5 Ack: 0x5820ADD0 Win: 0x7D78 TcpLen: 32
TCP Options (3) => NOP NOP TS: 23678634 2878772
===== 03/15-20:21:24.452051 211.185.125.124:789 -> 172.16.1.103:111 UDP TTL:43 TOS:0x0 ID:29733 IpLen:20 DgmLen:84
Len: 64
01 0A 8A 0A 00 00 00 00 00 00 02 00 01 86 A0 .....
00 00 00 02 00 00 00 03 00 00 00 00 00 00 00 .....
00 00 00 00 00 00 00 00 01 86 B8 00 00 00 01 .....
00 00 00 11 00 00 00 00 .....
===== 03/15-20:21:24.730436 211.185.125.124:790 -> 172.16.1.103:32773 UDP TTL:43 TOS:0x0 ID:29781 IpLen:20 DgmLen:1104 Len: 1084
47 F7
9F 63 00 00 00 00 00 00 02 00 01 86 B8
```

- A. The attacker has conducted a network sweep on port 111



- B. The attacker has scanned and exploited the system using Buffer Overflow
- C. The attacker has used a Trojan on port 32773
- D. The attacker has installed a backdoor

**Correct Answer: A**

**Section:**

#### QUESTION 4

What method would be most efficient for you to acquire digital evidence from this network?

- A. OS/2
- B. BSD Unix
- C. Linux
- D. Microsoft Windows

**Correct Answer: B**

**Section:**

#### QUESTION 5

Which component in the hard disk moves over the platter to read and write information?

- A. Actuator
- B. Spindle
- C. Actuator Axis
- D. Head

**Correct Answer: D**

**Section:**

#### QUESTION 6

Before you are called to testify as an expert, what must an attorney do first?

- A. engage in damage control
- B. prove that the tools you used to conduct your examination are perfect
- C. read your curriculum vitae to the jury
- D. qualify you as an expert witness

**Correct Answer: D**

**Section:**

#### QUESTION 7

You are contracted to work as a computer forensics investigator for a regional bank that has four 30 TB storage area networks that store customer data. What method would be most efficient for you to acquire digital evidence from this network?

- A. create a compressed copy of the file with DoubleSpace
- B. create a sparse data copy of a folder or file
- C. make a bit-stream disk-to-image file



D. make a bit-stream disk-to-disk file

**Correct Answer: C**

**Section:**

**QUESTION 8**

You are working for a large clothing manufacturer as a computer forensics investigator and are called in to investigate an unusual case of an employee possibly stealing clothing designs from the company and selling them under a different brand name for a different company. What you discover during the course of the investigation is that the clothing designs are actually original products of the employee and the company has no policy against an employee selling his own designs on his own time. The only thing that you can find that the employee is doing wrong is that his clothing design incorporates the same graphic symbol as that of the company with only the wording in the graphic being different. What area of the law is the employee violating?

- A. trademark law
- B. copyright law
- C. printright law
- D. brandmark law

**Correct Answer: A**

**Section:**

**QUESTION 9**

What file structure database would you expect to find on floppy disks?

- A. NTFS
- B. FAT32
- C. FAT16
- D. FAT12

**Correct Answer: D**

**Section:**

**QUESTION 10**

What type of attack occurs when an attacker can force a router to stop forwarding packets by flooding the router with many open connections simultaneously so that all the hosts behind the router are effectively disabled?

- A. digital attack
- B. denial of service
- C. physical attack
- D. ARP redirect

**Correct Answer: B**

**Section:**

**QUESTION 11**

When examining a file with a Hex Editor, what space does the file header occupy?

- A. the last several bytes of the file
- B. the first several bytes of the file
- C. none, file headers are contained in the FAT



D. one byte at the beginning of the file

**Correct Answer: D**

**Section:**

**QUESTION 12**

In the context of file deletion process, which of the following statement holds true?

- A. When files are deleted, the data is overwritten and the cluster marked as available
- B. The longer a disk is in use, the less likely it is that deleted files will be overwritten
- C. While booting, the machine may create temporary files that can delete evidence
- D. Secure delete programs work by completely overwriting the file in one go

**Correct Answer: C**

**Section:**

**QUESTION 13**

A suspect is accused of violating the acceptable use of computing resources, as he has visited adult websites and downloaded images. The investigator wants to demonstrate that the suspect did indeed visit these sites. However, the suspect has cleared the search history and emptied the cookie cache. Moreover, he has removed any images he might have downloaded. What can the investigator do to prove the violation?

- A. Image the disk and try to recover deleted files
- B. Seek the help of co-workers who are eye-witnesses
- C. Check the Windows registry for connection data (you may or may not recover)
- D. Approach the websites for evidence

**Correct Answer: A**

**Section:**

**QUESTION 14**

A(n) \_\_\_\_\_ is one that's performed by a computer program rather than the attacker manually performing the steps in the attack sequence.

- A. blackout attack
- B. automated attack
- C. distributed attack
- D. central processing attack

**Correct Answer: B**

**Section:**

**QUESTION 15**

The offset in a hexadecimal code is:

- A. The last byte after the colon
- B. The 0x at the beginning of the code
- C. The 0x at the end of the code
- D. The first byte after the colon



**Correct Answer: B**

**Section:**

**QUESTION 16**

It takes \_\_\_\_\_ mismanaged case/s to ruin your professional reputation as a computer forensics examiner?

- A. by law, three
- B. quite a few
- C. only one
- D. at least two

**Correct Answer: C**

**Section:**

**QUESTION 17**

With the standard Linux second extended file system (Ext2fs), a file is deleted when the inode internal link count reaches \_\_\_\_\_.

- A. 0
- B. 10
- C. 100
- D. 1

**Correct Answer: A**

**Section:**

**QUESTION 18**

When examining the log files from a Windows IIS Web Server, how often is a new log file created?

- A. the same log is used at all times
- B. a new log file is created everyday
- C. a new log file is created each week
- D. a new log is created each time the Web Server is started

**Correct Answer: A**

**Section:**

**QUESTION 19**

Which part of the Windows Registry contains the user's password file?

- A. HKEY\_LOCAL\_MACHINE
- B. HKEY\_CURRENT\_CONFIGURATION
- C. HKEY\_USER
- D. HKEY\_CURRENT\_USER

**Correct Answer: A**

**Section:**



**QUESTION 20**

An employee is attempting to wipe out data stored on a couple of compact discs (CDs) and digital video discs (DVDs) by using a large magnet. You inform him that this method will not be effective in wiping out the data because CDs and DVDs are \_\_\_\_\_ media used to store large amounts of data and are not affected by the magnet.

- A. logical
- B. anti-magnetic
- C. magnetic
- D. optical

**Correct Answer: D**

**Section:**

**QUESTION 21**

Lance wants to place a honeypot on his network. Which of the following would be your recommendations?

- A. Use a system that has a dynamic addressing on the network
- B. Use a system that is not directly interacting with the router
- C. Use it on a system in an external DMZ in front of the firewall
- D. It doesn't matter as all replies are faked

**Correct Answer: D**

**Section:**

**QUESTION 22**

What does the acronym POST mean as it relates to a PC?

- A. Primary Operations Short Test
- B. PowerOn Self Test
- C. Pre Operational Situation Test
- D. Primary Operating System Test

**Correct Answer: B**

**Section:**

**QUESTION 23**

Which legal document allows law enforcement to search an office, place of business, or other locale for evidence relating to an alleged crime?

- A. bench warrant
- B. wire tap
- C. subpoena
- D. search warrant

**Correct Answer: D**

**Section:**

**QUESTION 24**

You are working as an investigator for a corporation and you have just received instructions from your manager to assist in the collection of 15 hard drives that are part of an ongoing investigation.



Your job is to complete the required evidence custody forms to properly document each piece of evidence as it is collected by other members of your team. Your manager instructs you to complete one multi-evidence form for the entire case and a single-evidence form for each hard drive. How will these forms be stored to help preserve the chain of custody of the case?

- A. All forms should be placed in an approved secure container because they are now primary evidence in the case.
- B. The multi-evidence form should be placed in the report file and the single-evidence forms should be kept with each hard drive in an approved secure container.
- C. The multi-evidence form should be placed in an approved secure container with the hard drives and the single-evidence forms should be placed in the report file.
- D. All forms should be placed in the report file because they are now primary evidence in the case.

**Correct Answer: B**

**Section:**

#### QUESTION 25

The MD5 program is used to:

- A. wipe magnetic media before recycling it
- B. make directories on an evidence disk
- C. view graphics files on an evidence drive
- D. verify that a disk is not altered when you examine it

**Correct Answer: D**

**Section:**

#### QUESTION 26

Which is a standard procedure to perform during all computer forensics investigations?



- A. with the hard drive removed from the suspect PC, check the date and time in the system's CMOS
- B. with the hard drive in the suspect PC, check the date and time in the File Allocation Table
- C. with the hard drive removed from the suspect PC, check the date and time in the system's RAM
- D. with the hard drive in the suspect PC, check the date and time in the system's CMOS

**Correct Answer: A**

**Section:**

#### QUESTION 27

E-mail logs contain which of the following information to help you in your investigation? (Choose four.)

- A. user account that was used to send the account
- B. attachments sent with the e-mail message
- C. unique message identifier
- D. contents of the e-mail message
- E. date and time the message was sent

**Correct Answer: A, C, D, E**

**Section:**

#### QUESTION 28

In a forensic examination of hard drives for digital evidence, what type of user is most likely to have the most file slack to analyze?



- A. one who has NTFS 4 or 5 partitions
- B. one who uses dynamic swap file capability
- C. one who uses hard disk writes on IRQ 13 and 21
- D. one who has lots of allocation units per block or cluster

**Correct Answer: D**

**Section:**

#### QUESTION 29

In what way do the procedures for dealing with evidence in a criminal case differ from the procedures for dealing with evidence in a civil case?

- A. evidence must be handled in the same way regardless of the type of case
- B. evidence procedures are not important unless you work for a law enforcement agency
- C. evidence in a criminal case must be secured more tightly than in a civil case
- D. evidence in a civil case must be secured more tightly than in a criminal case

**Correct Answer: C**

**Section:**

#### QUESTION 30

You are assigned to work in the computer forensics lab of a state police agency. While working on a high profile criminal case, you have followed every applicable procedure, however your boss is still concerned that the defense attorney might question whether evidence has been changed while at the lab. What can you do to prove that the evidence is the same as it was when it first entered the lab?

- A. make an MD5 hash of the evidence and compare it with the original MD5 hash that was taken when the evidence first entered the lab
- B. make an MD5 hash of the evidence and compare it to the standard database developed by NIST
- C. there is no reason to worry about this possible claim because state labs are certified
- D. sign a statement attesting that the evidence is the same as it was when it entered the lab

**Correct Answer: A**

**Section:**

#### QUESTION 31

Study the log given below and answer the following question:

```
Apr 24 14:46:46 [4663]: spp_portscan: portscan detected from 194.222.156.169
Apr 24 14:46:46 [4663]: IDS27/FIN Scan: 194.222.156.169:56693 -> 172.16.1.107:482
Apr 24 18:01:05 [4663]: IDS/DNS-version-query: 212.244.97.121:3485 -> 172.16.1.107:53
Apr 24 19:04:01 [4663]: IDS213/ftp-passwd-retrieval: 194.222.156.169:1425 -> 172.16.1.107:21
Apr 25 08:02:41 [5875]: spp_portscan: PORTSCAN DETECTED from 24.9.255.53
Apr 25 02:08:07 [5875]: IDS277/DNS-version-query: 63.226.81.13:4499 -> 172.16.1.107:53
Apr 25 02:08:07 [5875]: IDS277/DNS-version-query: 63.226.81.13:4630 -> 172.16.1.101:53
Apr 25 02:38:17 [5875]: IDS/RPC-rpcinfo-query: 212.251.1.94:642 -> 172.16.1.107:111
Apr 25 19:37:32 [5875]: IDS230/web-cgi-space-wildcard: 198.173.35.164:4221 -> 172.16.1.107:80
Apr 26 05:45:12 [6283]: IDS212/dns-zone-transfer: 38.31.107.87:2291 -> 172.16.1.101:53
Apr 26 06:43:05 [6283]: IDS181/nops-x86: 63.226.81.13:1351 -> 172.16.1.107:53
Apr 26 06:44:25 victim7 PAM_pwd[12509]: (login) session opened for user simple by (uid=0)
Apr 26 06:44:36 victim7 PAM_pwd[12521]: (su) session opened for user simon by simple(uid=506)
Apr 26 06:45:34 [6283]: IDS175/socks-probe: 24.112.167.35:20 -> 172.16.1.107:1080
```

Apr 26 06:52:10 [6283]: IDS127/telnet-login-incorrect: 172.16.1.107:23 -> 213.28.22.189:4558

Precautionary measures to prevent this attack would include writing firewall rules. Of these firewall rules, which among the following would be appropriate?

- A. Disallow UDP53 in from outside to DNS server
- B. Allow UDP53 in from DNS server to outside
- C. Disallow TCP53 in from secondaries or ISP server to DNS server
- D. Block all UDP traffic

**Correct Answer: A**

**Section:**

#### QUESTION 32

When monitoring for both intrusion and security events between multiple computers, it is essential that the computers' clocks are synchronized. Synchronized time allows an administrator to reconstruct what took place during an attack against multiple computers. Without synchronized time, it is very difficult to determine exactly when specific events took place, and how events interlace. What is the name of the service used to synchronize time among multiple computers?

- A. Universal Time Set
- B. Network Time Protocol
- C. SyncTime Service
- D. Time-Sync Protocol

**Correct Answer: B**

**Section:**

#### QUESTION 33

When investigating a potential e-mail crime, what is your first step in the investigation?

- A. Trace the IP address to its origin
- B. Write a report
- C. Determine whether a crime was actually committed
- D. Recover the evidence

**Correct Answer: A**

**Section:**

#### QUESTION 34

If a suspect computer is located in an area that may have toxic chemicals, you must:

- A. coordinate with the HAZMAT team
- B. determine a way to obtain the suspect computer
- C. assume the suspect machine is contaminated
- D. do not enter alone

**Correct Answer: A**

**Section:**

#### QUESTION 35



The following excerpt is taken from a honeypot log. The log captures activities across three days.

There are several intrusion attempts; however, a few are successful.

(Note: The objective of this question is to test whether the student can read basic information from log entries and interpret the nature of attack.)

```
Apr 24 14:46:46 [4663]: spp_portscan: portscan detected from 194.222.156.169
Apr 24 14:46:46 [4663]: IDS27/FIN Scan: 194.222.156.169:56693 -> 172.16.1.107:482
Apr 24 18:01:05 [4663]: IDS/DNS-version-query: 212.244.97.121:3485 -> 172.16.1.107:53
Apr 24 19:04:01 [4663]: IDS213/ftp-passwd-retrieval: 194.222.156.169:1425 -> 172.16.1.107:21
Apr 25 08:02:41 [5875]: spp_portscan: PORTSCAN DETECTED from 24.9.255.53
Apr 25 02:08:07 [5875]: IDS277/DNS-version-query: 63.226.81.13:4499 -> 172.16.1.107:53
Apr 25 02:08:07 [5875]: IDS277/DNS-version-query: 63.226.81.13:4630 -> 172.16.1.101:53
Apr 25 02:38:17 [5875]: IDS/RPC-rpcinfo-query: 212.251.1.94:642 -> 172.16.1.107:111
Apr 25 19:37:32 [5875]: IDS230/web-cgi-space-wildcard: 198.173.35.164:4221 -> 172.16.1.107:80
Apr 26 05:45:12 [6283]: IDS212/dns-zone-transfer: 38.31.107.87:2291 -> 172.16.1.101:53
Apr 26 06:43:05 [6283]: IDS181/nops-x86: 63.226.81.13:1351 -> 172.16.1.107:53
Apr 26 06:44:25 victim7 PAM_pwdb[12509]: (login) session opened for user simple by (uid=0)
Apr 26 06:44:36 victim7 PAM_pwdb[12521]: (su) session opened for user simon by simple(uid=506)
Apr 26 06:45:34 [6283]: IDS175/socks-probe: 24.112.167.35:20 -> 172.16.1.107:1080
Apr 26 06:52:10 [6283]: IDS127/telnet-login-incorrect: 172.16.1.107:23 -> 213.28.22.189:4558
From the options given below choose the one which best interprets the following entry:
Apr 26 06:43:05 [6283]: IDS181/nops-x86: 63.226.81.13:1351 -> 172.16.1.107:53
```

- A. An IDS evasion technique
- B. A buffer overflow attempt
- C. A DNS zone transfer
- D. Data being retrieved from 63.226.81.13

**Correct Answer: A**

**Section:**

### QUESTION 36

Windows identifies which application to open a file with by examining which of the following?

- A. The File extension
- B. The file attributes
- C. The file Signature at the end of the file
- D. The file signature at the beginning of the file

**Correct Answer: A**

**Section:**

### QUESTION 37

You have used a newly released forensic investigation tool, which doesn't meet the Daubert Test, during a case. The case has ended-up in court. What argument could the defense make to weaken your case?

- A. The tool hasn't been tested by the International Standards Organization (ISO)
- B. Only the local law enforcement should use the tool
- C. The total has not been reviewed and accepted by your peers
- D. You are not certified for using the tool



**Correct Answer: C**

**Section:**

**QUESTION 38**

Which of the following is NOT a graphics file?

- A. Picture1.tga
- B. Picture2.bmp
- C. Picture3.nfo
- D. Picture4.psd

**Correct Answer: C**

**Section:**

**QUESTION 39**

When conducting computer forensic analysis, you must guard against \_\_\_\_\_ So that you remain focused on the primary job and insure that the level of work does not increase beyond what was originally expected.

- A. Hard Drive Failure
- B. Scope Creep
- C. Unauthorized expenses
- D. Overzealous marketing

**Correct Answer: B**

**Section:**

**QUESTION 40**

In General, \_\_\_\_\_ Involves the investigation of data that can be retrieved from the hard disk or other disks of a computer by applying scientific methods to retrieve the data.

- A. Network Forensics
- B. Data Recovery
- C. Disaster Recovery
- D. Computer Forensics

**Correct Answer: D**

**Section:**

**QUESTION 41**

When you carve an image, recovering the image depends on which of the following skills?

- A. Recognizing the pattern of the header content
- B. Recovering the image from a tape backup
- C. Recognizing the pattern of a corrupt file
- D. Recovering the image from the tape backup

**Correct Answer: A**

**Section:**



**QUESTION 42**

When a file is deleted by Windows Explorer or through the MS-DOS delete command, the operating system inserts \_\_\_\_\_ in the first letter position of the filename in the FAT database.

- A. A Capital X
- B. A Blank Space
- C. The Underscore Symbol
- D. The lowercase Greek Letter Sigma (s)

**Correct Answer: D**

**Section:**

**QUESTION 43**

While working for a prosecutor, what do you think you should do if the evidence you found appears to be exculpatory and is not being released to the defense?

- A. Keep the information of file for later review
- B. Destroy the evidence
- C. Bring the information to the attention of the prosecutor, his or her supervisor or finally to the judge
- D. Present the evidence to the defense attorney

**Correct Answer: C**

**Section:**

**QUESTION 44**

In Microsoft file structures, sectors are grouped together to form:

- A. Clusters
- B. Drives
- C. Bitstreams
- D. Partitions

**Correct Answer: A**

**Section:**

**QUESTION 45**

What type of file is represented by a colon (:) with a name following it in the Master File Table of NTFS disk?

- A. A compressed file
- B. A Data stream file
- C. An encrypted file
- D. A reserved file

**Correct Answer: B**

**Section:**

**QUESTION 46**

An Employee is suspected of stealing proprietary information belonging to your company that he had no rights to possess. The information was stored on the Employees Computer that was protected with the NTFS Encrypted File System (EFS) and you had observed him copy the files to a floppy disk just before leaving work for the weekend. You detain the Employee before he leaves the building and recover the floppy disks and secure his



computer. Will you be able to break the encryption so that you can verify that that the employee was in possession of the proprietary information?

- A. EFS uses a 128-bit key that can't be cracked, so you will not be able to recover the information
- B. When the encrypted file was copied to the floppy disk, it was automatically unencrypted, so you can recover the information.
- C. The EFS Revoked Key Agent can be used on the Computer to recover the information
- D. When the Encrypted file was copied to the floppy disk, the EFS private key was also copied to the floppy disk, so you can recover the information.

**Correct Answer: B**

**Section:**

#### QUESTION 47

When examining a hard disk without a write-blocker, you should not start windows because Windows will write data to the:

- A. Recycle Bin
- B. MSDOS.sys
- C. BIOS
- D. Case files

**Correct Answer: A**

**Section:**

#### QUESTION 48

You are called in to assist the police in an investigation involving a suspected drug dealer. The suspects house was searched by the police after a warrant was obtained and they located a floppy disk in the suspects bedroom. The disk contains several files, but they appear to be password protected. What are two common methods used by password cracking software that you can use to obtain the password?

- A. Limited force and library attack
- B. Brute Force and dictionary Attack
- C. Maximum force and thesaurus Attack
- D. Minimum force and appendix Attack

**Correct Answer: B**

**Section:**

#### QUESTION 49

When reviewing web logs, you see an entry for resource not found in the HTTP status code filed.

What is the actual error code that you would see in the log for resource not found?

- A. 202
- B. 404
- C. 505
- D. 909

**Correct Answer: B**

**Section:**

#### QUESTION 50

Volatile Memory is one of the leading problems for forensics. Worms such as code Red are memory resident and do write themselves to the hard drive, if you turn the system off they disappear. In a lab environment, which of

the following options would you suggest as the most appropriate to overcome the problem of capturing volatile memory?

- A. Use VMware to be able to capture the data in memory and examine it
- B. Give the Operating System a minimal amount of memory, forcing it to use a swap file
- C. Create a Separate partition of several hundred megabytes and place the swap file there
- D. Use intrusion forensic techniques to study memory resident infections

**Correct Answer: C**

**Section:**

#### QUESTION 51

You are working in the security Department of law firm. One of the attorneys asks you about the topic of sending fake email because he has a client who has been charged with doing just that. His client alleges that he is innocent and that there is no way for a fake email to actually be sent. You inform the attorney that his client is mistaken and that fake email is possibility and that you can prove it. You return to your desk and craft a fake email to the attorney that appears to come from his boss. What port do you send the email to on the company SMTP server?

- A. 10
- B. 25
- C. 110
- D. 135

**Correct Answer: B**

**Section:**

#### QUESTION 52

This is original file structure database that Microsoft originally designed for floppy disks. It is written to the outermost track of a disk and contains information about each file stored on the drive.

- A. Master Boot Record (MBR)
- B. Master File Table (MFT)
- C. File Allocation Table (FAT)
- D. Disk Operating System (DOS)

**Correct Answer: C**

**Section:**

#### QUESTION 53

What should you do when approached by a reporter about a case that you are working on or have worked on?

- A. Refer the reporter to the attorney that retained you
- B. Say, "no comment"
- C. Answer all the reporter's questions as completely as possible
- D. Answer only the questions that help your case

**Correct Answer: A**

**Section:**

#### QUESTION 54

Which of the following refers to the data that might still exist in a cluster even though the original file has been overwritten by another file?

- A. Sector
- B. Metadata
- C. MFT
- D. Slack Space

**Correct Answer: D**

**Section:**

#### QUESTION 55

A state department site was recently attacked and all the servers had their disks erased. The incident response team sealed the area and commenced investigation. During evidence collection they came across a zip disks that did not have the standard labeling on it. The incident team ran the disk on an isolated system and found that the system disk was accidentally erased. They decided to call in the FBI for further investigation. Meanwhile, they short listed possible suspects including three summer interns. Where did the incident team go wrong?

- A. They examined the actual evidence on an unrelated system
- B. They attempted to implicate personnel without proof
- C. They tampered with evidence by using it
- D. They called in the FBI without correlating with the fingerprint data

**Correct Answer: C**

**Section:**

#### QUESTION 56

When investigating a Windows System, it is important to view the contents of the page or swap file because:

- A. Windows stores all of the systems configuration information in this file
- B. This is file that windows use to communicate directly with Registry
- C. A Large volume of data can exist within the swap file of which the computer user has no knowledge
- D. This is the file that windows use to store the history of the last 100 commands that were run from the command line

**Correct Answer: C**

**Section:**

#### QUESTION 57

Chris has been called upon to investigate a hacking incident reported by one of his clients. The company suspects the involvement of an insider accomplice in the attack. Upon reaching the incident scene, Chris secures the physical area, records the scene using visual medi a. He shuts the system down by pulling the power plug so that he does not disturb the system in any way. He labels all cables and connectors prior to disconnecting any. What do you think would be the next sequence of events?

- A. Connect the target media; prepare the system for acquisition; Secure the evidence; Copy the media
- B. Prepare the system for acquisition; Connect the target media; copy the media; Secure the evidence
- C. Connect the target media; Prepare the system for acquisition; Secure the evidence; Copy the media
- D. Secure the evidence; prepare the system for acquisition; Connect the target media; copy the media

**Correct Answer: B**

**Section:**

#### QUESTION 58



The use of warning banners helps a company avoid litigation by overcoming an employee assumed \_\_\_\_\_. When connecting to the company's intranet, network or Virtual Private Network (VPN) and will allow the company's investigators to monitor, search and retrieve information stored within the network.

- A. Right to work
- B. Right of free speech
- C. Right to Internet Access
- D. Right of Privacy

**Correct Answer: D**

**Section:**

#### QUESTION 59

What does mactime, an essential part of the coroner's toolkit do?

- A. It traverses the file system and produces a listing of all files based on the modification, access and change timestamps
- B. It can recover deleted file space and search it for data. However, it does not allow the investigator to preview them
- C. The tools scans for i-node information, which is used by other tools in the tool kit
- D. It is too specific to the MAC OS and forms a core component of the toolkit

**Correct Answer: A**

**Section:**

#### QUESTION 60

One way to identify the presence of hidden partitions on a suspect's hard drive is to:



- A. Add up the total size of all known partitions and compare it to the total size of the hard drive
- B. Examine the FAT and identify hidden partitions by noting an H in the partition Type field
- C. Examine the LILO and note an H in the partition Type field
- D. It is not possible to have hidden partitions on a hard drive

**Correct Answer: A**

**Section:**

#### QUESTION 61

What information do you need to recover when searching a victim's computer for a crime committed with specific e-mail message?

- A. Internet service provider information
- B. E-mail header
- C. Username and password
- D. Firewall log

**Correct Answer: B**

**Section:**

#### QUESTION 62

Melanie was newly assigned to an investigation and asked to make a copy of all the evidence from the compromised system. Melanie did a DOS copy of all the files on the system. What would be the primary reason for you to recommend a disk imaging tool?

- A. A disk imaging tool would check for CRC32s for internal self-checking and validation and have MD5 checksum
- B. Evidence file format will contain case data entered by the examiner and encrypted at the beginning of the evidence file
- C. A simple DOS copy will not include deleted files, file slack and other information
- D. There is no case for an imaging tool as it will use a closed, proprietary format that if compared to the original will not match up sector for sector

**Correct Answer: C**

**Section:**

**QUESTION 63**

You are employed directly by an attorney to help investigate an alleged sexual harassment case at a large pharmaceutical manufacture. While at the corporate office of the company, the CEO demands to know the status of the investigation. What prevents you from discussing the case with the CEO?

- A. the attorney-work-product rule
- B. Good manners
- C. Trade secrets
- D. ISO 17799

**Correct Answer: A**

**Section:**

**QUESTION 64**

One technique for hiding information is to change the file extension from the correct one to one that might not be noticed by an investigator. For example, changing a .jpg extension to a .doc extension so that a picture file appears to be a document. What can an investigator examine to verify that a file has the correct extension?

- A. the File Allocation Table
- B. the file header
- C. the file footer
- D. the sector map

**Correct Answer: B**

**Section:**

**QUESTION 65**

This organization maintains a database of hash signatures for known software.

- A. International Standards Organization
- B. Institute of Electrical and Electronics Engineers
- C. National Software Reference Library
- D. American National standards Institute

**Correct Answer: C**

**Section:**

**QUESTION 66**

The \_\_\_\_\_ refers to handing over the results of private investigations to the authorities because of indications of criminal activity.

- A. Locard Exchange Principle
- B. Clark Standard
- C. Kelly Policy
- D. Silver-Platter Doctrine

**Correct Answer: D**

**Section:**

**QUESTION 67**

You are working as Computer Forensics investigator and are called by the owner of an accounting firm to investigate possible computer abuse by one of the firm's employees. You meet with the owner of the firm and discover that the company has never published a policy stating that they reserve the right to inspect their computing assets at will. What do you do?

- A. Inform the owner that conducting an investigation without a policy is not a problem because the company is privately owned
- B. Inform the owner that conducting an investigation without a policy is a violation of the 4th amendment
- C. Inform the owner that conducting an investigation without a policy is a violation of the employee's expectation of privacy
- D. Inform the owner that conducting an investigation without a policy is not a problem because a policy is only necessary for government agencies

**Correct Answer: C**

**Section:**

**QUESTION 68**

During the course of a corporate investigation, you find that an Employee is committing a crime. Can the Employer file a criminal complaint with Police?

- A. Yes, and all evidence can be turned over to the police
- B. Yes, but only if you turn the evidence over to a federal law enforcement agency
- C. No, because the investigation was conducted without following standard police procedures
- D. No, because the investigation was conducted without warrant



**Correct Answer: A**

**Section:**

**QUESTION 69**

\_\_\_\_\_ is simply the application of Computer Investigation and analysis techniques in the interests of determining potential legal evidence.

- A. Network Forensics
- B. Computer Forensics
- C. Incident Response
- D. Event Reaction

**Correct Answer: B**

**Section:**

**QUESTION 70**

What is the name of the Standard Linux Command that is also available as windows application that can be used to create bit-stream images?

- A. mcopy

- B. image
- C. MD5
- D. dd

**Correct Answer: D**

**Section:**

**QUESTION 71**

To preserve digital evidence, an investigator should \_\_\_\_\_.

- A. Make two copies of each evidence item using a single imaging tool
- B. Make a single copy of each evidence item using an approved imaging tool
- C. Make two copies of each evidence item using different imaging tools
- D. Only store the original evidence item

**Correct Answer: C**

**Section:**

**QUESTION 72**

Profiling is a forensics technique for analyzing evidence with the goal of identifying the perpetrator from their various activity. After a computer has been compromised by a hacker, which of the following would be most important in forming a profile of the incident?

- A. The manufacturer of the system compromised
- B. The logic, formatting and elegance of the code used in the attack
- C. The nature of the attack
- D. The vulnerability exploited in the incident



**Correct Answer: B**

**Section:**

**QUESTION 73**

Printing under a Windows Computer normally requires which one of the following files types to be created?

- A. EME
- B. MEM
- C. EMF
- D. CME

**Correct Answer: C**

**Section:**

**QUESTION 74**

An Expert witness give an opinion if:

- A. The Opinion, inferences or conclusions depend on special knowledge, skill or training not within the ordinary experience of lay jurors
- B. To define the issues of the case for determination by the finder of fact
- C. To stimulate discussion between the consulting expert and the expert witness

D. To deter the witness from expanding the scope of his or her investigation beyond the requirements of the case

**Correct Answer: A**

**Section:**

**QUESTION 75**

When using Windows acquisitions tools to acquire digital evidence, it is important to use a welltested hardware write-blocking device to:

- A. Automate Collection from image files
- B. Avoiding copying data from the boot partition
- C. Acquire data from host-protected area on a disk
- D. Prevent Contamination to the evidence drive

**Correct Answer: D**

**Section:**

**QUESTION 76**

Office Documents (Word, Excel and PowerPoint) contain a code that allows tracking the MAC or unique identifier of the machine that created the document. What is that code called?

- A. Globally unique ID
- B. Microsoft Virtual Machine Identifier
- C. Personal Application Protocol
- D. Individual ASCII string

**Correct Answer: A**

**Section:**

**QUESTION 77**

You have completed a forensic investigation case. You would like to destroy the data contained in various disks at the forensics lab due to sensitivity of the case. How would you permanently erase the data on the hard disk?

- A. Throw the hard disk into the fire
- B. Run the powerful magnets over the hard disk
- C. Format the hard disk multiple times using a low level disk utility
- D. Overwrite the contents of the hard disk with Junk data

**Correct Answer: A**

**Section:**

**QUESTION 78**

You have been asked to investigate after a user has reported a threatening e-mail they have received from an external source. Which of the following are you most interested in when trying to trace the source of the message?

- A. The X509 Address
- B. The SMTP reply Address
- C. The E-mail Header
- D. The Host Domain Name



**Correct Answer: C**

**Section:**

**QUESTION 79**

You are working as a Computer forensics investigator for a corporation on a computer abuse case.

You discover evidence that shows the subject of your investigation is also embezzling money from the company. The company CEO and the corporate legal counsel advise you to contact law enforcement and provide them with the evidence that you have found. The law enforcement officer that responds requests that you put a network sniffer on your network and monitor all traffic to the subject's computer. You inform the officer that you will not be able to comply with that request because doing so would:

- A. Violate your contract
- B. Cause network congestion
- C. Make you an agent of law enforcement
- D. Write information to the subject's hard drive

**Correct Answer: C**

**Section:**

**QUESTION 80**

A law enforcement officer may only search for and seize criminal evidence with \_\_\_\_\_, which are facts or circumstances that would lead a reasonable person to believe a crime has been committed or is about to be committed, evidence of the specific crime exists and the evidence of the specific crime exists at the place to be searched.

- A. Mere Suspicion
- B. A preponderance of the evidence
- C. Probable cause
- D. Beyond a reasonable doubt



**Correct Answer: C**

**Section:**

**QUESTION 81**

The police believe that Melvin Matthew has been obtaining unauthorized access to computers belonging to numerous computer software and computer operating systems manufacturers, cellular telephone manufacturers, Internet Service Providers and Educational Institutions. They also suspect that he has been stealing, copying and misappropriating proprietary computer software belonging to the several victim companies. What is preventing the police from breaking down the suspects door and searching his home and seizing all of his computer equipment if they have not yet obtained a warrant?

- A. The Fourth Amendment
- B. The USA patriot Act
- C. The Good Samaritan Laws
- D. The Federal Rules of Evidence

**Correct Answer: A**

**Section:**

**QUESTION 82**

When cataloging digital evidence, the primary goal is to

- A. Make bit-stream images of all hard drives
- B. Preserve evidence integrity

- C. Not remove the evidence from the scene
- D. Not allow the computer to be turned off

**Correct Answer: B**

**Section:**

**QUESTION 83**

You are conducting an investigation of fraudulent claims in an insurance company that involves complex text searches through large numbers of documents. Which of the following tools would allow you to quickly and efficiently search for a string within a file on the bitmap image of the target computer?

- A. Stringsearch
- B. grep
- C. dir
- D. vim

**Correct Answer: B**

**Section:**

**QUESTION 84**

As a CHFI professional, which of the following is the most important to your professional reputation?

- A. Your Certifications
- B. The correct, successful management of each and every case
- C. The free that you charge
- D. The friendship of local law enforcement officers



**Correct Answer: B**

**Section:**

**QUESTION 85**

In conducting a computer abuse investigation you become aware that the suspect of the investigation is using ABC Company as his Internet Service Provider (ISP). You contact ISP and request that they provide you assistance with your investigation. What assistance can the ISP provide?

- A. The ISP can investigate anyone using their service and can provide you with assistance
- B. The ISP can investigate computer abuse committed by their employees, but must preserve the privacy of their customers and therefore cannot assist you without a warrant
- C. The ISP can't conduct any type of investigations on anyone and therefore can't assist you
- D. ISP's never maintain log files so they would be of no use to your investigation

**Correct Answer: B**

**Section:**

**QUESTION 86**

You are assisting in the investigation of a possible Web Server Hack. The company who called you stated that customers reported to them that whenever they entered the web address of the company in their browser, what they received was a porno graphic web site. The company checked the web server and nothing appears wrong. When you type in the IP address of the web site in your browser everything appears normal. What is the name of the attack that affects the DNS cache of the name resolution servers, resulting in those servers directing users to the wrong web site?

- A. ARP Poisoning
- B. DNS Poisoning
- C. HTTP redirect attack
- D. IP Spoofing

**Correct Answer: B**  
**Section:**

**QUESTION 87**

You are working as an independent computer forensics investigator and received a call from a systems administrator for a local school system requesting your assistance. One of the students at the local high school is suspected of downloading inappropriate images from the Internet to a PC in the Computer lab. When you arrive at the school, the systems administrator hands you a hard drive and tells you that he made a "simple backup copy" of the hard drive in the PC and put it on this drive and requests that you examine that drive for evidence of the suspected images. You inform him that a "simple backup copy" will not provide deleted files or recover file fragments.

What type of copy do you need to make to ensure that the evidence found is complete and admissible in future proceeding?

- A. Bit-stream Copy
- B. Robust Copy
- C. Full backup Copy
- D. Incremental Backup Copy

**Correct Answer: A**  
**Section:**

**QUESTION 88**

Law enforcement officers are conducting a legal search for which a valid warrant was obtained.

While conducting the search, officers observe an item of evidence for an unrelated crime that was not included in the warrant. The item was clearly visible to the officers and immediately identified as evidence. What is the term used to describe how this evidence is admissible?

- A. Plain view doctrine
- B. Corpus delicti
- C. Locard Exchange Principle
- D. Ex Parte Order

**Correct Answer: A**  
**Section:**

**QUESTION 89**

Microsoft Outlook maintains email messages in a proprietary format in what type of file?

- A. .email
- B. .mail
- C. .pst
- D. .doc

**Correct Answer: C**  
**Section:**





**QUESTION 90**

The efforts to obtain information before a trial by demanding documents, depositions, questioned and answers written under oath, written requests for admissions of fact and examination of the scene is a description of what legal term?

- A. Detection
- B. Hearsay
- C. Spoliation
- D. Discovery

**Correct Answer: D**

**Section:**

**QUESTION 91**

The rule of thumb when shutting down a system is to pull the power plug. However, it has certain drawbacks. Which of the following would that be?

- A. Any data not yet flushed to the system will be lost
- B. All running processes will be lost
- C. The /tmp directory will be flushed
- D. Power interruption will corrupt the pagefile

**Correct Answer: A**

**Section:**

**QUESTION 92**

You are a computer forensics investigator working with local police department and you are called to assist in an investigation of threatening emails. The complainant has printer out 27 email messages from the suspect and gives the printouts to you. You inform her that you will need to examine her computer because you need access to the \_\_\_\_\_ in order to track the emails back to the suspect.

- A. Routing Table
- B. Firewall log
- C. Configuration files
- D. Email Header

**Correct Answer: D**

**Section:**

**QUESTION 93**

Hackers can gain access to Windows Registry and manipulate user passwords, DNS settings, access rights or others features that they may need in order to accomplish their objectives. One simple method for loading an application at startup is to add an entry (Key) to the following Registry Hive:

- A. HKEY\_LOCAL\_MACHINE\hardware\windows\start
- B. HKEY\_LOCAL\_USERS\Software\Microsoft\old\Version\Load
- C. HKEY\_CURRENT\_USER\Microsoft\Default
- D. HKEY\_LOCAL\_MACHINE\Software\Microsoft\CurrentVersion\Run

**Correct Answer: D**

**Section:**

**QUESTION 94**

Which of the following file system is used by Mac OS X?

- A. EFS
- B. HFS+
- C. EXT2
- D. NFS

**Correct Answer: B**

**Section:**

**QUESTION 95**

When you are running a vulnerability scan on a network and the IDS cuts off your connection, what type of IDS is being used?

- A. Passive IDS
- B. Active IDS
- C. Progressive IDS
- D. NIPS

**Correct Answer: B**

**Section:**

**QUESTION 96**

Simon is a former employee of Trinitron XML Inc. He feels he was wrongly terminated and wants to hack into his former company's network. Since Simon remembers some of the server names, he attempts to run the axfr and ixfr commands using DIG. What is Simon trying to accomplish here?

- A. Send DOS commands to crash the DNS servers
- B. Perform DNS poisoning
- C. Perform a zone transfer
- D. Enumerate all the users in the domain

**Correct Answer: C**

**Section:**

**QUESTION 97**

What will the following command produce on a website login page? `SELECT email, passwd, login_id, full_name FROM members WHERE email = 'someone@somewhere.com'; DROP TABLE members; --'`

- A. Deletes the entire members table
- B. Inserts the Error! Reference source not found.email address into the members table
- C. Retrieves the password for the first user in the members table
- D. This command will not produce anything since the syntax is incorrect

**Correct Answer: A**

**Section:**

**QUESTION 98**

You setup SNMP in multiple offices of your company. Your SNMP software manager is not receiving data from other offices like it is for your main office. You suspect that firewall changes are to blame.

What ports should you open for SNMP to work through Firewalls? (Choose two.)

- A. 162
- B. 161
- C. 163
- D. 160

**Correct Answer: A, B**

**Section:**

**QUESTION 99**

You are carrying out the last round of testing for your new website before it goes live. The website has many dynamic pages and connects to a SQL backend that accesses your product inventory in a database. You come across a web security site that recommends inputting the following code into a search field on web pages to check for vulnerabilities: When you type this and click on search, you receive a pop-up window that says: "This is a test." What is the result of this test?

- A. Your website is vulnerable to CSS
- B. Your website is not vulnerable
- C. Your website is vulnerable to SQL injection
- D. Your website is vulnerable to web bugs

**Correct Answer: A**

**Section:**

**QUESTION 100**

If an attacker's computer sends an IPID of 31400 to a zombie computer on an open port in IDLE scanning, what will be the response?

- A. The zombie will not send a response
- B. 31402
- C. 31399
- D. 31401

**Correct Answer: D**

**Section:**

**QUESTION 101**

Michael works for Kimball Construction Company as senior security analyst. As part of yearly security audit, Michael scans his network for vulnerabilities. Using Nmap, Michael conducts XMAS scan and most of the ports scanned do not give a response. In what state are these ports?

- A. Closed
- B. Open
- C. Stealth
- D. Filtered

**Correct Answer: B**

**Section:**

**QUESTION 102**

What is the smallest physical storage unit on a hard drive?

- A. Track
- B. Cluster
- C. Sector
- D. Platter

**Correct Answer: C**

**Section:**

**QUESTION 103**

When needing to search for a website that is no longer present on the Internet today but was online few years back, what site can be used to view the website collection of pages?

- A. Proxify.net
- B. Dnsstuff.com
- C. Samspace.org
- D. Archive.org

**Correct Answer: D**

**Section:**

**QUESTION 104**

Under confession, an accused criminal admitted to encrypting child pornography pictures and then hiding them within other pictures. What technique did the accused criminal employ?

- A. Typography
- B. Steganalysis
- C. Picture encoding
- D. Steganography

**Correct Answer: D**

**Section:**

**QUESTION 105**

Where does Encase search to recover NTFS files and folders?

- A. MBR
- B. MFT
- C. Slack space
- D. HAL

**Correct Answer: B**

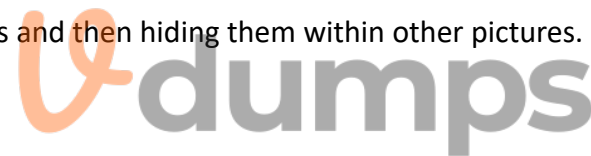
**Section:**

**QUESTION 106**

Given the drive dimensions as follows and assuming a sector has 512 bytes, what is the capacity of the described hard drive?

22,164 cylinders/disk

80 heads/cylinder



63 sectors/track

- A. 53.26 GB
- B. 57.19 GB
- C. 11.17 GB
- D. 10 GB

**Correct Answer: A**  
**Section:**

**QUESTION 107**

Travis, a computer forensics investigator, is finishing up a case he has been working on for over a month involving copyright infringement and embezzlement. His last task is to prepare an investigative report for the president of the company he has been working for. Travis must submit a hard copy and an electronic copy to this president. In what electronic format should Travis send this report?

- A. TIFF-8
- B. DOC
- C. WPD
- D. PDF

**Correct Answer: D**  
**Section:**

**QUESTION 108**

A forensics investigator is searching the hard drive of a computer for files that were recently moved to the Recycle Bin. He searches for files in C:\RECYCLED using a command line tool but does not find anything. What is the reason for this?

- A. He should search in C:\Windows\System32\RECYCLED folder
- B. The Recycle Bin does not exist on the hard drive
- C. The files are hidden and he must use switch to view them
- D. Only FAT system contains RECYCLED folder and not NTFS

**Correct Answer: C**  
**Section:**

**QUESTION 109**

Why should you never power on a computer that you need to acquire digital evidence from?

- A. When the computer boots up, files are written to the computer rendering the data nclean
- B. When the computer boots up, the system cache is cleared which could destroy evidence
- C. When the computer boots up, data in the memory buffer is cleared which could destroy evidence
- D. Powering on a computer has no affect when needing to acquire digital evidence from it

**Correct Answer: A**  
**Section:**

**QUESTION 110**

What is the slave device connected to the secondary IDE controller on a Linux OS referred to?

- A. hda
- B. hdd
- C. hdb
- D. hdc

**Correct Answer: B**

**Section:**

**QUESTION 111**

What will the following command accomplish? `dd if=/dev/xxx of=mbr.backup bs=512 count=1`

- A. Back up the master boot record
- B. Restore the master boot record
- C. Mount the master boot record on the first partition of the hard drive
- D. Restore the first 512 bytes of the first partition of the hard drive

**Correct Answer: A**

**Section:**

**QUESTION 112**

Preparing an image drive to copy files to is the first step in Linux forensics. For this purpose, what would the following command accomplish? `dcfldd if=/dev/zero of=/dev/hda bs=4096 conv=noerror, sync`

- A. Fill the disk with zeros
- B. Low-level format
- C. Fill the disk with 4096 zeros
- D. Copy files from the master disk to the slave disk on the secondary IDE controller

**Correct Answer: A**

**Section:**

**QUESTION 113**

A picture file is recovered from a computer under investigation. During the investigation process, the file is enlarged 500% to get a better view of its contents. The picture quality is not degraded at all from this process. What kind of picture is this file. What kind of picture is this file?

- A. Raster image
- B. Vector image
- C. Metafile image
- D. Catalog image

**Correct Answer: B**

**Section:**

**QUESTION 114**

What advantage does the tool Evidor have over the built-in Windows search?

- A. It can find deleted files even after they have been physically removed



- B. It can find bad sectors on the hard drive
- C. It can search slack space
- D. It can find files hidden within ADS

**Correct Answer: C**

**Section:**

**QUESTION 115**

An on-site incident response team is called to investigate an alleged case of computer tampering within their company. Before proceeding with the investigation, the CEO informs them that the incident will be classified as low level. How long will the team have to respond to the incident?

- A. One working day
- B. Two working days
- C. Immediately
- D. Four hours

**Correct Answer: A**

**Section:**

**QUESTION 116**

What type of attack sends SYN requests to a target system with spoofed IP addresses?

- A. SYN flood
- B. Ping of death
- C. Cross site scripting
- D. Land

**Correct Answer: A**

**Section:**

**QUESTION 117**

Harold is a computer forensics investigator working for a consulting firm out of Atlanta Georgia. Harold is called upon to help with a corporate espionage case in Miami Florida. Harold assists in the investigation by pulling all the data from the computers allegedly used in the illegal activities. He finds that two suspects in the company were stealing sensitive corporate information and selling it to competing companies. From the email and instant messenger logs recovered, Harold has discovered that the two employees notified the buyers by writing symbols on the back of specific stop signs. This way, the buyers knew when and where to meet with the alleged suspects to buy the stolen material. What type of steganography did these two suspects use?

- A. Text semagram
- B. Visual semagram
- C. Grill cipher
- D. Visual cipher

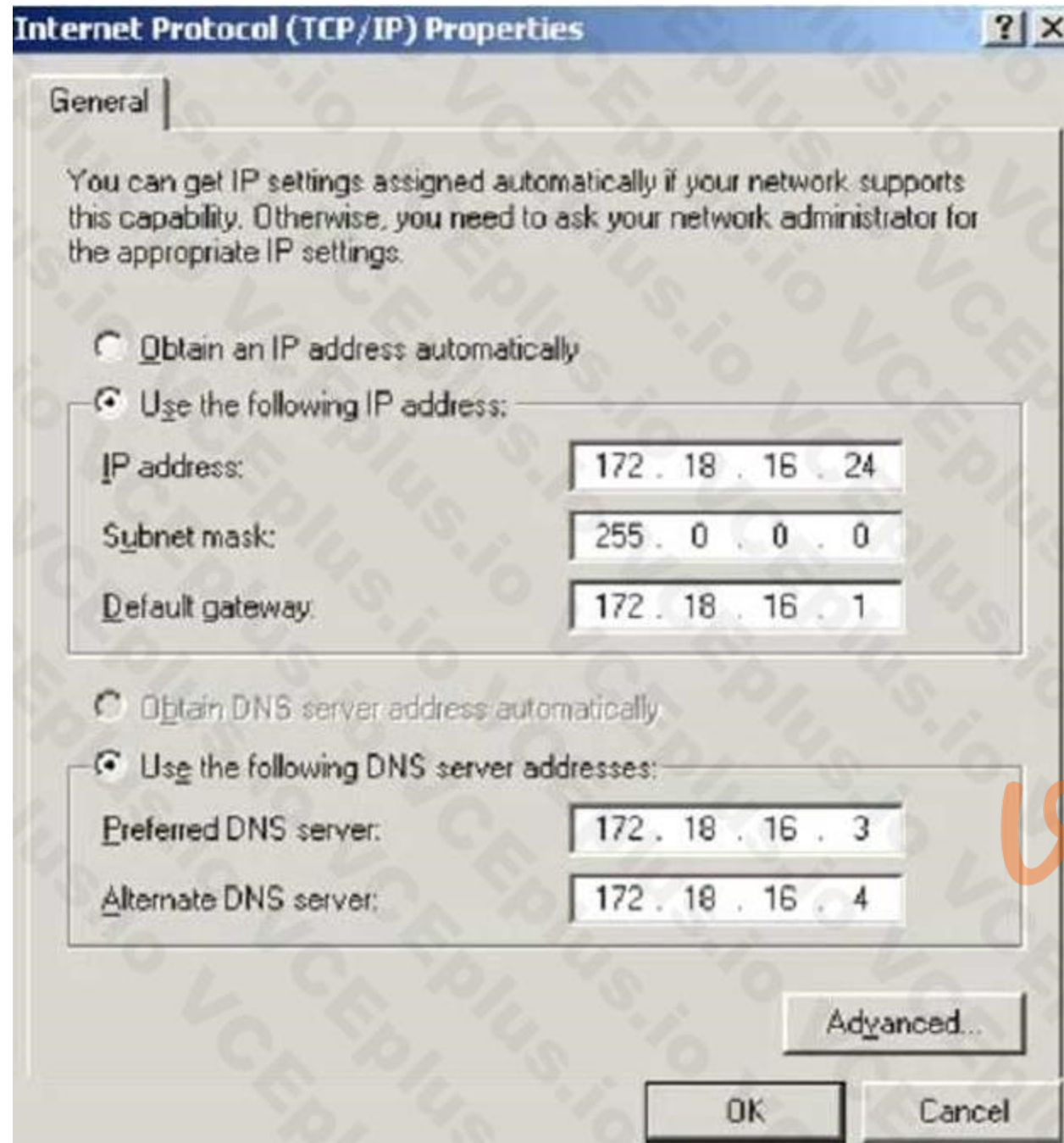
**Correct Answer: B**

**Section:**

**QUESTION 118**

What is the CIDR from the following screenshot?





- A. /24A./24A./24
- B. /32 B./32 B./32
- C. /16 C./16 C./16
- D. /8D./8D./8

**Correct Answer: D**  
**Section:**

**QUESTION 119**

How many times can data be written to a DVD+R disk?

- A. Twice
- B. Once



- C. Zero
- D. Infinite

**Correct Answer: B**

**Section:**

**QUESTION 120**

What must be obtained before an investigation is carried out at a location?

- A. Search warrant
- B. Subpoena
- C. Habeas corpus
- D. Modus operandi

**Correct Answer: A**

**Section:**

**QUESTION 121**

Paul is a computer forensics investigator working for Tyler & Company Consultants. Paul has been called upon to help investigate a computer hacking ring broken up by the local police. Paul begins to inventory the PCs found in the hackers hideout. Paul then comes across a PDA left by them that is attached to a number of different peripheral devices. What is the first step that Paul must take with the PDA to ensure the integrity of the investigation?

- A. Place PDA, including all devices, in an antistatic bag
- B. Unplug all connected devices
- C. Power off all devices if currently on
- D. Photograph and document the peripheral devices



**Correct Answer: D**

**Section:**

**QUESTION 122**

During an investigation, an employee was found to have deleted harassing emails that were sent to someone else. The company was using Microsoft Exchange and had message tracking enabled. Where could the investigator search to find the message tracking log file on the Exchange server?

- A. C:\Program Files\Exchsrvr\servername.log
- B. D:\Exchsrvr\Message Tracking\servername.log
- C. C:\Exchsrvr\Message Tracking\servername.log
- D. C:\Program Files\Microsoft Exchange\srvr\servername.log

**Correct Answer: A**

**Section:**

**QUESTION 123**

Paraben Lockdown device uses which operating system to write hard drive data?

- A. Mac OS
- B. Red Hat

- C. Unix
- D. Windows

**Correct Answer: D**

**Section:**

**QUESTION 124**

What technique is used by JPEGs for compression?

- A. ZIP
- B. TCD
- C. DCT
- D. TIFF-8

**Correct Answer: C**

**Section:**

**QUESTION 125**

John is working as a computer forensics investigator for a consulting firm in Canada. He is called to seize a computer at a local web cafe purportedly used as a botnet server. John thoroughly scans the computer and finds nothing that would lead him to think the computer was a botnet server. John decides to scan the virtual memory of the computer to possibly find something he had missed. What information will the virtual memory scan produce?

- A. It contains the times and dates of when the system was last patched
- B. It is not necessary to scan the virtual memory of a computer
- C. It contains the times and dates of all the system files
- D. Hidden running processes



**Correct Answer: D**

**Section:**

**QUESTION 126**

What method of copying should always be performed first before carrying out an investigation?

- A. Parity-bit copy
- B. Bit-stream copy
- C. MS-DOS disc copy
- D. System level copy

**Correct Answer: B**

**Section:**

**QUESTION 127**

Where is the default location for Apache access logs on a Linux computer?

- A. `usr/local/apache/logs/access_log`
- B. `bin/local/home/apache/logs/access_log`
- C. `usr/logs/access_log`

D. logs/usr/apache/access\_log

**Correct Answer: A**

**Section:**

**QUESTION 128**

Jacob is a computer forensics investigator with over 10 years experience in investigations and has written over 50 articles on computer forensics. He has been called upon as a qualified witness to testify the accuracy and integrity of the technical log files gathered in an investigation into computer fraud. What is the term used for Jacob testimony in this case?

- A. Justification
- B. Authentication
- C. Reiteration
- D. Certification

**Correct Answer: B**

**Section:**

**QUESTION 129**

How often must a company keep log files for them to be admissible in a court of law?

- A. All log files are admissible in court no matter their frequency
- B. Weekly
- C. Monthly
- D. Continuously

**Correct Answer: D**

**Section:**

**QUESTION 130**

What file is processed at the end of a Windows XP boot to initialize the logon dialog box?

- A. NTOSKRNL.EXE
- B. NTLDR
- C. LSASS.EXE
- D. NTDETECT.COM

**Correct Answer: A**

**Section:**

**QUESTION 131**

John is working on his company policies and guidelines. The section he is currently working on covers company documents; how they should be handled, stored, and eventually destroyed. John is concerned about the process whereby outdated documents are destroyed. What type of shredder should John write in the guidelines to be used when destroying documents?

- A. Strip-cut shredder
- B. Cross-cut shredder
- C. Cross-hatch shredder
- D. Cris-cross shredder



**Correct Answer: B**

**Section:**

**QUESTION 132**

To check for POP3 traffic using Ethereal, what port should an investigator search by?

- A. 143
- B. 25
- C. 110
- D. 125

**Correct Answer: C**

**Section:**

**QUESTION 133**

When should an MD5 hash check be performed when processing evidence?

- A. After the evidence examination has been completed
- B. On an hourly basis during the evidence examination
- C. Before and after evidence examination
- D. Before the evidence examination has been completed

**Correct Answer: C**

**Section:**

**QUESTION 134**

At what layer does a cross site scripting attack occur on?

- A. Presentation
- B. Application
- C. Session
- D. Data Link

**Correct Answer: B**

**Section:**

**QUESTION 135**

Davidson Trucking is a small transportation company that has three local offices in Detroit Michigan.

Ten female employees that work for the company have gone to an attorney reporting that male employees repeatedly harassed them and that management did nothing to stop the problem.

Davidson has employee policies that outline all company guidelines, including awareness on harassment and how it will not be tolerated. When the case is brought to court, whom should the prosecuting attorney call upon for not upholding company policy?

- A. IT personnel
- B. Employees themselves
- C. Supervisors
- D. Administrative assistant in charge of writing policies



**Correct Answer: C**

**Section:**

**QUESTION 136**

When searching through file headers for picture file formats, what should be searched to find a JPEG file in hexadecimal format?

- A. FF D8 FF E0 00 10
- B. FF FF FF FF FF FF
- C. FF 00 FF 00 FF 00
- D. EF 00 EF 00 EF 00

**Correct Answer: A**

**Section:**

**QUESTION 137**

Jack Smith is a forensics investigator who works for Mason Computer Investigation Services. He is investigating a computer that was infected by Ramen Virus.



```
C:\WINDOWS\system32\cmd.exe
C:\>netstat -an

Active Connections

Proto Local Address Foreign Address
TCP 0.0.0.0:135 0.0.0.0:0
TCP 0.0.0.0:242 0.0.0.0:0
TCP 0.0.0.0:445 0.0.0.0:0
TCP 0.0.0.0:990 0.0.0.0:0
TCP 0.0.0.0:2584 0.0.0.0:0
TCP 0.0.0.0:2585 0.0.0.0:0
TCP 0.0.0.0:2967 0.0.0.0:0
TCP 0.0.0.0:3389 0.0.0.0:0
TCP 0.0.0.0:12174 0.0.0.0:0
TCP 0.0.0.0:38292 0.0.0.0:0
TCP 127.0.0.1:242 127.0.0.1:1042
TCP 127.0.0.1:1042 127.0.0.1:242
TCP 127.0.0.1:1044 0.0.0.0:0
TCP 127.0.0.1:1046 0.0.0.0:0
TCP 127.0.0.1:1078 0.0.0.0:0
TCP 127.0.0.1:2584 127.0.0.1:2909
TCP 127.0.0.1:2909 127.0.0.1:2584
TCP 127.0.0.1:5679 0.0.0.0:0
TCP 127.0.0.1:7438 0.0.0.0:0
TCP 172.16.28.75:139 0.0.0.0:0
TCP 172.16.28.75:1067 172.16.28.102:445
TCP 172.16.28.75:1071 172.16.28.103:139
TCP 172.16.28.75:1116 172.16.28.102:1026
TCP 172.16.28.75:1135 172.16.28.101:389
TCP 172.16.28.75:1138 172.16.28.104:445
TCP 172.16.28.75:1148 172.16.28.101:389
TCP 172.16.28.75:1610 172.16.28.101:139
TCP 172.16.28.75:2589 172.16.28.101:389
TCP 172.16.28.75:2793 172.16.28.106:445
TCP 172.16.28.75:3801 172.16.28.104:1148
TCP 172.16.28.75:3890 172.16.28.104:135
TCP 172.16.28.75:3891 172.16.28.104:1056
TCP 172.16.28.75:3892 172.16.28.104:1155
TCP 172.16.28.75:3893 172.16.28.102:135
TCP 172.16.28.75:3896 172.16.28.101:135
TCP 172.16.28.75:3899 172.16.28.104:135
TCP 172.16.28.75:3900 172.16.28.104:1056
TCP 172.16.28.75:3901 172.16.28.104:1155
```



He runs the netstat command on the machine to see its current connections. In the following screenshot, what do the 0.0.0.0 IP addresses signify?

- A. Those connections are established
- B. Those connections are in listening mode
- C. Those connections are in closed/waiting mode
- D. Those connections are in timed out/waiting mode

Correct Answer: B

Section:

**QUESTION 138**

What type of flash memory card comes in either Type I or Type II and consumes only five percent of the power required by small hard drives?

- A. SD memory
- B. CF memory
- C. MMC memory
- D. SM memory

**Correct Answer: B**

**Section:**

**QUESTION 139**

Julie is a college student majoring in Information Systems and Computer Science. She is currently writing an essay for her computer crimes class. Julie paper focuses on white-collar crimes in America and how forensics investigators investigate the cases. Julie would like to focus the subject. Julie would like to focus the subject of the essay on the most common type of crime found in corporate America. What crime should Julie focus on?

- A. Physical theft
- B. Copyright infringement
- C. Industrial espionage
- D. Denial of Service attacks

**Correct Answer: C**

**Section:**

**QUESTION 140**

A forensics investigator needs to copy data from a computer to some type of removable media so he can examine the information at another location. The problem is that the data is around 42GB in size. What type of removable media could the investigator use?

- A. Blu-Ray single-layer
- B. HD-DVD
- C. Blu-Ray dual-layer
- D. DVD-18

**Correct Answer: C**

**Section:**

**QUESTION 141**

Steven has been given the task of designing a computer forensics lab for the company he works for.

He has found documentation on all aspects of how to design a lab except the number of exits needed. How many exits should Steven include in his design for the computer forensics lab?

- A. Three
- B. One
- C. Two
- D. Four

**Correct Answer: B**

**Section:**

**QUESTION 142**

You have been called in to help with an investigation of an alleged network intrusion. After questioning the members of the company IT department, you search through the server log files to find any trace of the intrusion. After that you decide to telnet into one of the company routers to see if there is any evidence to be found. While connected to the router, you see some unusual activity and believe that the attackers are currently connected to that router. You start up an ethereal session to begin capturing traffic on the router that could be used in the investigation. At what layer of the OSI model are you monitoring while watching traffic to and from the router?

- A. Network
- B. Transport
- C. Data Link
- D. Session

**Correct Answer: A**

**Section:**

**QUESTION 143**

Which forensic investigating concept trails the whole incident from how the attack began to how the victim was affected?

- A. Point-to-point
- B. End-to-end
- C. Thorough
- D. Complete event analysis

**Correct Answer: B**

**Section:**

**QUESTION 144**

Sniffers that place NICs in promiscuous mode work at what layer of the OSI model?

- A. Network
- B. Transport
- C. Physical
- D. Data Link

**Correct Answer: C**

**Section:**

**QUESTION 145**

Where are files temporarily written in Unix when printing?

- A. /usr/spool
- B. /var/print
- C. /spool
- D. /var/spool

**Correct Answer: D**

**Section:**

**QUESTION 146**



All Blackberry email is eventually sent and received through what proprietary RIM-operated mechanism?

- A. Blackberry Message Center
- B. Microsoft Exchange
- C. Blackberry WAP gateway
- D. Blackberry WEP gateway

**Correct Answer: A**

**Section:**

**QUESTION 147**

Which program is the bootloader when Windows XP starts up?

- A. KERNEL.EXE
- B. NTLDR
- C. LOADER
- D. LILO

**Correct Answer: B**

**Section:**

**QUESTION 148**

What encryption technology is used on Blackberry devices Password Keeper?

- A. 3DES
- B. AES
- C. Blowfish
- D. RC5

**Correct Answer: B**

**Section:**

**QUESTION 149**

What is the first step taken in an investigation for laboratory forensic staff members?

- A. Packaging the electronic evidence
- B. Securing and evaluating the electronic crime scene
- C. Conducting preliminary interviews
- D. Transporting the electronic evidence

**Correct Answer: B**

**Section:**

**QUESTION 150**

What type of analysis helps to identify the time and sequence of events in an investigation?

- A. Time-based



- B. Functional
- C. Relational
- D. Temporal

**Correct Answer: D**

**Section:**

**QUESTION 151**

Cylie is investigating a network breach at a state organization in Florida. She discovers that the intruders were able to gain access into the company firewalls by overloading them with IP packets. Cylie then discovers through her investigation that the intruders hacked into the company phone system and used the hard drives on their PBX system to store shared music files. What would this attack on the company PBX system be called?

- A. Phreaking
- B. Squatting
- C. Crunching
- D. Pretexting

**Correct Answer: A**

**Section:**

**QUESTION 152**

What will the following command accomplish in Linux? `fdisk /dev/hda`

- A. Partition the hard drive
- B. Format the hard drive
- C. Delete all files under the `/dev/hda` folder
- D. Fill the disk with zeros

**Correct Answer: A**

**Section:**

**QUESTION 153**

In the following email header, where did the email first originate from?

```
Microsoft Mail Internet Headers Version 2.0
Received: from smtp1.somedomain.com ([199.190.129.133]) by somedomain.com
with Microsoft SMTPSVC(6.0.3790.1830);
    Fri, 1 Jun 2007 09:43:08 -0500
Received: from david1.state.us.gov.us (david1.state.ok.gov [172.16.28.115])
    by smtp1.somedomain.com (8.13.1/8.12.11) with ESMTP id 151EfceH032241
    for <someone@somedomain.com>; Fri, 1 Jun 2007 09:41:13 -0500
Received: from simon1.state.ok.gov.us ([172.18.0.199]) by
david1.state.ok.gov.us with Microsoft SMTPSVC(6.0.3790.1830);
    Fri, 1 Jun 2007 09:41:13 -0500
X-Ninja-PIM: Scanned by Ninja
X-Ninja-AttachmentFiltering: (no action)
X-MimeOLE: Produced By Microsoft Exchange V6.5.7235.2
Content-class: urn:content-classes:message
Return-Receipt-To: "Johnson, Jimmy" <jimmy@somewhereelse.com>
MIME-version: 1.0
```



- A. Somedomain.com
- B. Sntp1.somedomain.com
- C. Simon1.state.ok.gov.us
- D. David1.state.ok.gov.us

**Correct Answer: C**

**Section:**

**QUESTION 154**

A computer forensics investigator is inspecting the firewall logs for a large financial institution that has employees working 24 hours a day, 7 days a week.

```

2007-06-14 23:59:05 192.168.254.1 action=Permit sent=16169 rcvd=180962 src=24.119.229.125 dst=10.120.10.122 src_port=38
2007-06-14 23:59:06 192.168.254.1 action=Deny sent=0 rcvd=12288 src=10.130.9.2 dst=224.0.0.2 src_port=49415 dst_port=49
2007-06-14 23:59:07 192.168.254.1 action=Permit sent=844 rcvd=486 src=24.119.229.125 dst=10.120.10.123 src_port=38660 d
2007-06-14 23:59:07 192.168.254.1 action=Permit sent=349 rcvd=404 src=192.168.254.80 dst=208.188.166.68 src_port=15113
2007-06-14 23:59:07 192.168.254.1 action=Permit sent=349 rcvd=404 src=192.168.254.80 dst=208.188.166.68 src_port=14857
2007-06-14 23:59:07 192.168.254.1 action=Deny sent=0 rcvd=12288 src=10.130.9.3 dst=224.0.0.2 src_port=49415 dst_port=49
2007-06-14 23:59:09 192.168.254.1 action=Permit sent=13795 rcvd=149962 src=70.185.206.122 dst=10.120.10.122 src_port=61
2007-06-14 23:59:09 192.168.254.1 action=Permit sent=690 rcvd=415 src=70.185.198.247 dst=10.120.10.123 src_port=48392 d
2007-06-14 23:59:09 192.168.254.1 action=Permit sent=12219 rcvd=140495 src=70.185.206.122 dst=10.120.10.122 src_port=61
2007-06-14 23:59:09 192.168.254.1 action=Deny sent=0 rcvd=12288 src=10.130.9.3 dst=224.0.0.2 src_port=49415 dst_port=49
2007-06-14 23:59:10 192.168.254.1 action=Deny sent=0 rcvd=12288 src=10.130.9.3 dst=224.0.0.2 src_port=49415 dst_port=49
2007-06-14 18:34:04 192.168.254.1 action=Permit sent=3018 rcvd=34134 src=70.185.198.247 dst=10.120.10.122 src_port=4480
2007-06-14 18:34:05 192.168.254.1 action=Permit sent=799 rcvd=6686 src=70.185.198.247 dst=10.120.10.122 src_port=46344
2007-06-14 18:34:07 192.168.254.1 action=Permit sent=2780 rcvd=18874 src=70.185.198.247 dst=10.120.10.122 src_port=4522
2007-06-14 18:34:07 192.168.254.1 action=Permit sent=2737 rcvd=8922 src=24.119.169.162 dst=10.120.10.122 src_port=2689
2007-06-14 18:34:09 192.168.254.1 action=Permit sent=2094 rcvd=23180 src=70.185.198.247 dst=10.120.10.122 src_port=4685
2007-06-14 18:34:11 192.168.254.1 action=Permit sent=2612 rcvd=68608 src=70.185.198.247 dst=10.120.10.122 src_port=4711
2007-06-14 19:34:12 192.168.254.1 action=Permit sent=4131 rcvd=71135 src=24.119.169.162 dst=10.120.10.122 src_port=1685
2007-06-14 18:34:13 192.168.254.1 action=Permit sent=646 rcvd=1803 src=70.185.198.247 dst=10.120.10.122 src_port=47368
2007-06-14 21:47:29 192.168.254.1 action=Permit sent=729 rcvd=1115 src=70.185.198.247 dst=10.120.10.122 src_port=48136
2007-06-14 21:47:30 192.168.254.1 action=Permit sent=766 rcvd=415 src=70.185.206.122 dst=10.120.10.123 src_port=62212 d
2007-06-14 21:47:31 192.168.254.1 action=Permit sent=3054 rcvd=81725 src=24.119.169.162 dst=10.120.10.122 src_port=7809
2007-06-14 21:47:37 192.168.254.1 action=Permit sent=26196 rcvd=233409 src=24.119.229.125 dst=10.120.10.122 src_port=38
2007-06-14 21:47:40 192.168.254.1 action=Deny sent=0 rcvd=12288 src=10.130.9.2 dst=224.0.0.2 src_port=49415 dst_port=49
2007-06-14 21:47:41 192.168.254.1 action=Permit sent=18121 rcvd=210841 src=216.97.160.253 dst=10.120.10.122 src_port=94
2007-06-14 21:47:42 192.168.254.1 action=Permit sent=5741 rcvd=102596 src=24.119.169.162 dst=10.120.10.122 src_port=375
2007-06-14 21:47:42 192.168.254.1 action=Permit sent=2982 rcvd=24075 src=24.119.169.162 dst=10.120.10.122 src_port=641
2007-06-14 21:47:43 192.168.254.1 action=Permit sent=2597 rcvd=28655 src=24.119.169.162 dst=10.120.10.122 src_port=1600
2007-06-14 21:47:46 192.168.254.1 action=Permit sent=840 rcvd=491 src=24.119.169.162 dst=10.120.10.123 src_port=13185 d
2007-06-14 21:47:49 192.168.254.1 action=Permit sent=3348 rcvd=18192 src=24.119.169.162 dst=10.120.10.122 src_port=4737
2007-06-14 21:47:53 192.168.254.1 action=Permit sent=3780 rcvd=34120 src=24.119.169.162 dst=10.120.10.122 src_port=3713
2007-06-14 21:47:57 192.168.254.1 action=Permit sent=3604 rcvd=30265 src=24.119.169.162 dst=10.120.10.122 src_port=6785
2007-06-14 21:47:58 192.168.254.1 action=Permit sent=3406 rcvd=39223 src=24.119.169.162 dst=10.120.10.122 src_port=5761
2007-06-14 21:47:59 192.168.254.1 action=Deny sent=0 rcvd=12288 src=10.130.9.3 dst=224.0.0.2 src_port=49415 dst_port=49
2007-06-14 21:48:04 192.168.254.1 action=Permit sent=349 rcvd=404 src=192.168.254.42 dst=208.188.166.68 src_port=7696 d
2007-06-14 21:48:05 192.168.254.1 action=Deny sent=0 rcvd=12288 src=10.130.9.2 dst=224.0.0.2 src_port=49415 dst_port=49
2007-06-14 21:48:09 192.168.254.1 action=Deny sent=0 rcvd=12288 src=10.130.9.3 dst=224.0.0.2 src_port=49415 dst_port=49
2007-06-14 21:48:09 192.168.254.1 action=Deny sent=0 rcvd=12288 src=10.130.9.2 dst=224.0.0.2 src_port=49415 dst_port=49
2007-06-14 21:48:10 192.168.254.1 action=Permit sent=407 rcvd=0 src=192.168.254.14 dst=204.61.5.130 src_port=260 dst_po
2007-06-14 21:48:13 192.168.254.1 action=Permit sent=1040 rcvd=0 src=192.168.254.14 dst=204.61.5.130 src_port=41216 dst
2007-06-14 21:48:15 192.168.254.1 action=Deny sent=0 rcvd=12288 src=10.130.9.3 dst=224.0.0.2 src_port=49415 dst_port=49
2007-06-14 21:48:16 192.168.254.1 action=Deny sent=0 rcvd=11264 src=10.130.9.3 dst=224.0.0.2 src_port=49415 dst_port=49

```

What can the investigator infer from the screenshot seen below?

- A. A smurf attack has been attempted
- B. A denial of service has been attempted
- C. Network intrusion has occurred
- D. Buffer overflow attempt on the firewall.

**Correct Answer: C**

**Section:**

**QUESTION 155**

When investigating a wireless attack, what information can be obtained from the DHCP logs?

- A. The operating system of the attacker and victim computers
- B. IP traffic between the attacker and the victim
- C. MAC address of the attacker
- D. If any computers on the network are running in promiscuous mode

**Correct Answer: C**

**Section:**

**QUESTION 156**

This type of testimony is presented by someone who does the actual fieldwork and does not offer a view in court.

- A. Civil litigation testimony
- B. Expert testimony
- C. Victim advocate testimony
- D. Technical testimony

**Correct Answer: D**

**Section:**

**QUESTION 157**

On an Active Directory network using NTLM authentication, where on the domain controllers are the passwords stored?

- A. SAM
- B. AMS
- C. Shadow file
- D. Password.conf

**Correct Answer: A**

**Section:**

**QUESTION 158**

Why is it still possible to recover files that have been emptied from the Recycle Bin on a Windows computer?

- A. The data is still present until the original location of the file is used
- B. The data is moved to the Restore directory and is kept there indefinitely
- C. The data will reside in the L2 cache on a Windows computer until it is manually deleted
- D. It is not possible to recover data that has been emptied from the Recycle Bin

**Correct Answer: A**

**Section:**

**QUESTION 159**

When is it appropriate to use computer forensics?

- A. If copyright and intellectual property theft/misuse has occurred
- B. If employees do not care for their boss management techniques
- C. If sales drop off for no apparent reason for an extended period of time



D. If a financial institution is burglarized by robbers

**Correct Answer: A**

**Section:**

**QUESTION 160**

Madison is on trial for allegedly breaking into her university internal network. The police raided her dorm room and seized all of her computer equipment. Madison lawyer is trying to convince the judge that the seizure was unfounded and baseless. Under which US Amendment is Madison lawyer trying to prove the police violated?

- A. The 10th Amendment
- B. The 5th Amendment
- C. The 1st Amendment
- D. The 4th Amendment

**Correct Answer: D**

**Section:**

**QUESTION 161**

Using Linux to carry out a forensics investigation, what would the following command accomplish? `dd if=/usr/home/partition.image of=/dev/sdb2 bs=4096 conv=notrunc,noerror`

- A. Search for disk errors within an image file
- B. Backup a disk to an image file
- C. Copy a partition to an image file
- D. Restore a disk from an image file

**Correct Answer: D**

**Section:**

**QUESTION 162**

In handling computer-related incidents, which IT role should be responsible for recovery, containment, and prevention to constituents?

- A. Security Administrator
- B. Network Administrator
- C. Director of Information Technology
- D. Director of Administration

**Correct Answer: B**

**Section:**

**QUESTION 163**

What will the following Linux command accomplish? `dd if=/dev/mem of=/home/sam/mem.bin bs=1024`

- A. Copy the master boot record to a file
- B. Copy the contents of the system folder to a file
- C. Copy the running memory to a file
- D. Copy the memory dump file to an image file



**Correct Answer: C**

**Section:**

**QUESTION 164**

Before performing a logical or physical search of a drive in Encase, what must be added to the program?

- A. File signatures
- B. Keywords
- C. Hash sets
- D. Bookmarks

**Correct Answer: B**

**Section:**

**QUESTION 165**

Which of the following Android libraries are used to render 2D (SGL) or 3D (OpenGL/ES) graphics content to the screen?

- A. OpenGL/ES and SGL
- B. Surface Manager
- C. Media framework
- D. WebKit

**Correct Answer: A**

**Section:**



**QUESTION 166**

Report writing is a crucial stage in the outcome of an investigation. Which information should not be included in the report section?

- A. Speculation or opinion as to the cause of the incident
- B. Purpose of the report
- C. Author of the report
- D. Incident summary

**Correct Answer: A**

**Section:**

**QUESTION 167**

You are assigned a task to examine the log files pertaining to MyISAM storage engine. While examining, you are asked to perform a recovery operation on a MyISAM log file. Which among the following MySQL Utilities allow you to do so?

- A. mysqldump
- B. myisamaccess
- C. myisamlog
- D. myisamchk

**Correct Answer: C**

**Section:**

**QUESTION 168**

Andie, a network administrator, suspects unusual network services running on a windows system. Which of the following commands should he use to verify unusual network services started on a Windows system?

- A. net serv
- B. netmgr
- C. lusrmgr
- D. net start

**Correct Answer: D**

**Section:**

**QUESTION 169**

Randy has extracted data from an old version of a Windows-based system and discovered info file Dc5.txt in the system recycle bin. What does the file name denote?

- A. A text file deleted from C drive in sixth sequential order
- B. A text file deleted from C drive in fifth sequential order
- C. A text file copied from D drive to C drive in fifth sequential order
- D. A text file copied from C drive to D drive in fifth sequential order

**Correct Answer: B**

**Section:**

**QUESTION 170**

Sheila is a forensics trainee and is searching for hidden image files on a hard disk. She used a forensic investigation tool to view the media in hexadecimal code for simplifying the search process. Which of the following hex codes should she look for to identify image files?

- A. ff d8 ff
- B. 25 50 44 46
- C. d0 0f 11 e0
- D. 50 41 03 04

**Correct Answer: A**

**Section:**

**QUESTION 171**

Shane, a forensic specialist, is investigating an ongoing attack on a MySQL database server hosted on a Windows machine with SID "WIN-ABCDE12345F." Which of the following log file will help Shane in tracking all the client connections and activities performed on the database server?

- A. WIN-ABCDE12345F.err
- B. WIN-ABCDE12345F-bin.n
- C. WIN-ABCDE12345F.pid
- D. WIN-ABCDE12345F.log

**Correct Answer: D**

**Section:**

**QUESTION 172**

What must an attorney do first before you are called to testify as an expert?

- A. Qualify you as an expert witness
- B. Read your curriculum vitae to the jury
- C. Engage in damage control
- D. Prove that the tools you used to conduct your examination are perfect

**Correct Answer: A**

**Section:**

**QUESTION 173**

Gary is checking for the devices connected to USB ports of a suspect system during an investigation. Select the appropriate tool that will help him document all the connected devices.

- A. DevScan
- B. Devcon
- C. fsutil
- D. Reg.exe

**Correct Answer: B**

**Section:**

**QUESTION 174**

Which of the following is NOT a physical evidence?

- A. Removable media
- B. Cables
- C. Image file on a hard disk
- D. Publications

**Correct Answer: C**

**Section:**

**QUESTION 175**

During forensics investigations, investigators tend to collect the system time at first and compare it with UTC. What does the abbreviation UTC stand for?

- A. Coordinated Universal Time
- B. Universal Computer Time
- C. Universal Time for Computers
- D. Correlated Universal Time

**Correct Answer: A**

**Section:**

**QUESTION 176**

Buffer overflow vulnerability of a web application occurs when it fails to guard its buffer properly and allows writing beyond its maximum size. Thus, it overwrites the\_\_\_\_\_. There are multiple forms of buffer overflow,





including a Heap Buffer Overflow and a Format String Attack.

- A. Adjacent memory locations
- B. Adjacent bit blocks
- C. Adjacent buffer locations
- D. Adjacent string locations

**Correct Answer: A**  
**Section:**

**QUESTION 177**

Which of the following is a part of a Solid-State Drive (SSD)?

- A. Head
- B. Cylinder
- C. NAND-based flash memory
- D. Spindle

**Correct Answer: C**  
**Section:**

**QUESTION 178**

Which of the following standard represents a legal precedent set in 1993 by the Supreme Court of the United States regarding the admissibility of expert witnesses' testimony during federal legal proceedings?

- A. SWGDE & SWGIT
- B. IOCE
- C. Frye
- D. Daubert

**Correct Answer: D**  
**Section:**

**QUESTION 179**

Which of the following statements is incorrect when preserving digital evidence?

- A. Verify if the monitor is in on, off, or in sleep mode
- B. Turn on the computer and extract Windows event viewer log files
- C. Remove the plug from the power router or modem
- D. Document the actions and changes that you observe in the monitor, computer, printer, or in other peripherals

**Correct Answer: B**  
**Section:**

**QUESTION 180**

Which of the following ISO standard defines file systems and protocol for exchanging data between optical disks?

- A. ISO 9660
- B. ISO/IEC 13940
- C. ISO 9060
- D. IEC 3490

**Correct Answer: A**  
**Section:**

**QUESTION 181**

Lynne receives the following email:

Dear lynne@gmail.com! We are sorry to inform you that your ID has been temporarily frozen due to incorrect or missing information saved at 2016/11/10 20:40:24 You have 24 hours to fix this problem or risk to be closed permanently! To proceed Please Connect >> My Apple ID Thank You The link to My Apple ID shows <http://byggarbetsplatsen.se/backup/signon/> What type of attack is this?

- A. Mail Bombing
- B. Phishing
- C. Email Spamming
- D. Email Spoofing

**Correct Answer: B**  
**Section:**

**QUESTION 182**

What value of the "Boot Record Signature" is used to indicate that the boot-loader exists?

- A. AA55
- B. 00AA
- C. AA00
- D. A100



**Correct Answer: A**  
**Section:**

**QUESTION 183**

Which of the following is a MAC-based File Recovery Tool?

- A. VirtualLab
- B. GetDataBack
- C. Cisdem DataRecovery 3
- D. Smart Undeleter

**Correct Answer: C**  
**Section:**

**QUESTION 184**

Smith, an employee of a reputed forensic investigation firm, has been hired by a private organization to investigate a laptop that is suspected to be involved in the hacking of the organization's DC server. Smith wants to find all the values typed into the Run box in the Start menu. Which of the following registry keys will Smith check to find the above information?

- A. TypedURLs key
- B. MountedDevices key
- C. UserAssist Key
- D. RunMRU key

**Correct Answer: D**

**Section:**

**QUESTION 185**

When analyzing logs, it is important that the clocks of all the network devices are synchronized. Which protocol will help in synchronizing these clocks?

- A. UTC
- B. PTP
- C. Time Protocol
- D. NTP

**Correct Answer: D**

**Section:**

**QUESTION 186**

An International Mobile Equipment Identifier (IMEI) is a 15-digit number that indicates the manufacturer, model type, and country of approval for GSM devices. The first eight digits of an IMEI number that provide information about the model and origin of the mobile device is also known as:

- A. Type Allocation Code (TAC)
- B. Integrated Circuit Code (ICC)
- C. Manufacturer Identification Code (MIC)
- D. Device Origin Code (DOC)



**Correct Answer: A**

**Section:**

**QUESTION 187**

Which of the following is NOT an anti-forensics technique?

- A. Data Deduplication
- B. Steganography
- C. Encryption
- D. Password Protection

**Correct Answer: A**

**Section:**

**QUESTION 188**

Rusty, a computer forensics apprentice, uses the command `nbtstat -c` while analyzing the network information in a suspect system. What information is he looking for?

- A. Contents of the network routing table

- B. Status of the network carrier
- C. Contents of the NetBIOS name cache
- D. Network connections

**Correct Answer: C**

**Section:**

#### QUESTION 189

Gary, a computer technician, is facing allegations of abusing children online by befriending them and sending them illicit adult images from his office computer. What type of investigation does this case require?

- A. Administrative Investigation
- B. Criminal Investigation
- C. Both Criminal and Administrative Investigation
- D. Civil Investigation

**Correct Answer: B**

**Section:**

#### QUESTION 190

The Apache server saves diagnostic information and error messages that it encounters while processing requests. The default path of this file is `usr/local/apache/logs/error.log` in Linux. Identify the Apache error log from the following logs.

- A. `http://victim.com/scripts/..%c0%af../..%c0%af../..%c0%af../..%c0%af../..%c0%af../..%c0%af../..%c0%af../winnt/system32/cmd.exe?/c+dir+C:\Winnt\system32\Logfiles\W3SVC1`
- B. `[Wed Oct 11 14:32:52 2000] [error] [client 127.0.0.1] client denied by server configuration: /export/home/live/ap/htdocs/test`
- C. `127.0.0.1 - frank [10/Oct/2000:13:55:36 -0700]"GET /apache_pb.gif HTTP/1.0" 200 2326`
- D. `127.0.0.1 - - [10/Apr/2007:10:39:11 +0300] ] [error] "GET /apache_pb.gif HTTP/1.0" 200 2326`

**Correct Answer: B**

**Section:**

#### QUESTION 191

Tasklist command displays a list of applications and services with their Process ID (PID) for all tasks running on either a local or a remote computer. Which of the following tasklist commands provides information about the listed processes, including the image name, PID, name, and number of the session for the process?

- A. `tasklist /p`
- B. `tasklist /v`
- C. `tasklist /u`
- D. `tasklist /s`

**Correct Answer: B**

**Section:**

#### QUESTION 192

Which part of Metasploit framework helps users to hide the data related to a previously deleted file or currently unused by the allocated file.

- A. Woffen FS

- B. RuneFS
- C. FragFS
- D. Slacker

**Correct Answer: D**

**Section:**

**QUESTION 193**

Which one of the following is not a first response procedure?

- A. Preserve volatile data
- B. Fill forms
- C. Crack passwords
- D. Take photos

**Correct Answer: C**

**Section:**

**QUESTION 194**

Graphics Interchange Format (GIF) is a \_\_\_\_\_ RGB bitmap image format for images with up to 256 distinct colors per frame.

- A. 8-bit
- B. 32-bit
- C. 16-bit
- D. 24-bit

**Correct Answer: A**

**Section:**

**QUESTION 195**

Hard disk data addressing is a method of allotting addresses to each \_\_\_\_\_ of data on a hard disk.

- A. Physical block
- B. Operating system block
- C. Hard disk block
- D. Logical block

**Correct Answer: A**

**Section:**

**QUESTION 196**

Which of the following standard represents a legal precedent regarding the admissibility of scientific examinations or experiments in legal cases?

- A. SWGDE & SWGIT
- B. Daubert
- C. Frye
- D. IOCE



**Correct Answer: C**

**Section:**

**QUESTION 197**

Event correlation is the process of finding relevance between the events that produce a final result.

What type of correlation will help an organization to correlate events across a set of servers, systems, routers and network?

- A. Same-platform correlation
- B. Network-platform correlation
- C. Cross-platform correlation
- D. Multiple-platform correlation

**Correct Answer: C**

**Section:**

**QUESTION 198**

What malware analysis operation can the investigator perform using the jv16 tool?

- A. Files and Folder Monitor
- B. Installation Monitor
- C. Network Traffic Monitoring/Analysis
- D. Registry Analysis/Monitoring

**Correct Answer: D**

**Section:**

**QUESTION 199**

Which of the following email headers specifies an address for mailer-generated errors, like "no such user" bounce messages, to go to (instead of the sender's address)?

- A. Mime-Version header
- B. Content-Type header
- C. Content-Transfer-Encoding header
- D. Errors-To header

**Correct Answer: D**

**Section:**

**QUESTION 200**

Jacob is a computer forensics investigator with over 10 years of experience in investigations and has written over 50 articles on computer forensics. He has been called upon as a qualified witness to testify the accuracy and integrity of the technical log files gathered in an investigation into computer fraud. What is the term used for Jacob's testimony in this case?

- A. Certification
- B. Justification
- C. Reiteration
- D. Authentication

**Correct Answer: D**



**Section:**

**QUESTION 201**

When a user deletes a file, the system creates a \$I file to store its details. What detail does the \$I file not contain?

- A. File Size
- B. File origin and modification
- C. Time and date of deletion
- D. File Name

**Correct Answer: B**

**Section:**

**QUESTION 202**

Raw data acquisition format creates \_\_\_\_\_ of a data set or suspect drive.

- A. Segmented image files
- B. Simple sequential flat files
- C. Compressed image files
- D. Segmented files

**Correct Answer: B**

**Section:**

**QUESTION 203**

CAN-SPAM act requires that you:

- A. Don't use deceptive subject lines
- B. Don't tell the recipients where you are located
- C. Don't identify the message as an ad
- D. Don't use true header information

**Correct Answer: A**

**Section:**

**QUESTION 204**

Which of the following registry hive gives the configuration information about which application was used to open various files on the system?

- A. HKEY\_CLASSES\_ROOT
- B. HKEY\_CURRENT\_CONFIG
- C. HKEY\_LOCAL\_MACHINE
- D. HKEY\_USERS

**Correct Answer: A**

**Section:**

**QUESTION 205**



Select the tool appropriate for examining the dynamically linked libraries of an application or malware.

- A. DependencyWalker
- B. SysAnalyzer
- C. PEiD
- D. ResourcesExtract

**Correct Answer: A**

**Section:**

**QUESTION 206**

Which among the following U.S. laws requires financial institutions-companies that offer consumers financial products or services such as loans, financial or investment advice, or insurance- to protect their customers' information against security threats?

- A. SOX
- B. HIPAA
- C. GLBA
- D. FISMA

**Correct Answer: C**

**Section:**

**QUESTION 207**

Which of the following application password cracking tool can discover all password-protected items on a computer and decrypts them?

- A. TestDisk for Windows
- B. R-Studio
- C. Windows Password Recovery Bootdisk
- D. Passware Kit Forensic

**Correct Answer: D**

**Section:**

**QUESTION 208**

An investigator has found certain details after analysis of a mobile device. What can reveal the manufacturer information?

- A. Equipment Identity Register (EIR)
- B. Electronic Serial Number (ESN)
- C. International mobile subscriber identity (IMSI)
- D. Integrated circuit card identifier (ICCID)

**Correct Answer: B**

**Section:**

**QUESTION 209**

Which command line tool is used to determine active network connections?



- A. netsh
- B. nbstat
- C. nslookup
- D. netstat

**Correct Answer: D**

**Section:**

**QUESTION 210**

Which of the following processes is part of the dynamic malware analysis?

- A. Process Monitoring
- B. Malware disassembly
- C. Searching for the strings
- D. File fingerprinting

**Correct Answer: A**

**Section:**

**QUESTION 211**

Investigators can use the Type Allocation Code (TAC) to find the model and origin of a mobile device.

Where is TAC located in mobile devices?

- A. International Mobile Equipment Identifier (IMEI)
- B. Integrated circuit card identifier (ICCID)
- C. International mobile subscriber identity (IMSI)
- D. Equipment Identity Register (EIR)

**Correct Answer: A**

**Section:**

**QUESTION 212**

What do you call the process in which an attacker uses magnetic field over the digital media device to delete any previously stored data?

- A. Disk deletion
- B. Disk cleaning
- C. Disk degaussing
- D. Disk magnetization

**Correct Answer: C**

**Section:**

**QUESTION 213**

Which of the following tool can reverse machine code to assembly language?

- A. PEiD
- B. RAM Capturer



- C. IDA Pro
- D. Deep Log Analyzer

**Correct Answer: C**

**Section:**

**QUESTION 214**

Which of the following file formats allows the user to compress the acquired data as well as keep it randomly accessible?

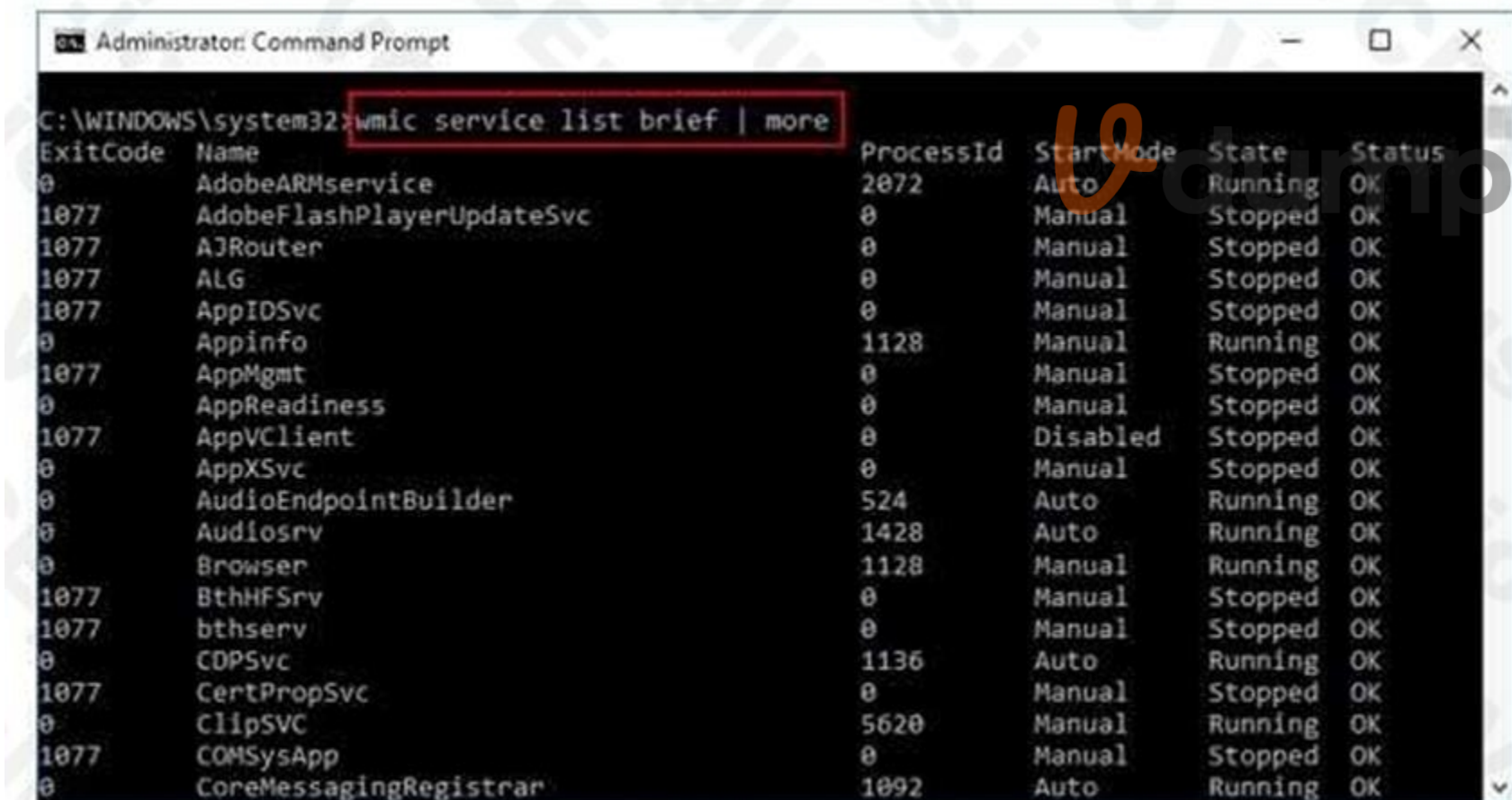
- A. Proprietary Format
- B. Generic Forensic Zip (gfwzip)
- C. Advanced Forensic Framework 4
- D. Advanced Forensics Format (AFF)

**Correct Answer: B**

**Section:**

**QUESTION 215**

What is the investigator trying to view by issuing the command displayed in the following screenshot?



```
Administrator: Command Prompt
C:\WINDOWS\system32>wmic service list brief | more
ExitCode Name ProcessId StartMode State Status
0 AdobeARMSvc 2072 Auto Running OK
1077 AdobeFlashPlayerUpdateSvc 0 Manual Stopped OK
1077 A3Router 0 Manual Stopped OK
1077 ALG 0 Manual Stopped OK
1077 AppIDSvc 0 Manual Stopped OK
0 Appinfo 1128 Manual Running OK
1077 AppMgmt 0 Manual Stopped OK
0 AppReadiness 0 Manual Stopped OK
1077 AppVClient 0 Disabled Stopped OK
0 AppXSvc 0 Manual Stopped OK
0 AudioEndpointBuilder 524 Auto Running OK
0 Audiosrv 1428 Auto Running OK
0 Browser 1128 Manual Running OK
1077 BthHFSrv 0 Manual Stopped OK
1077 bthserv 0 Manual Stopped OK
0 CDPSvc 1136 Auto Running OK
1077 CertPropSvc 0 Manual Stopped OK
0 ClipSVC 5620 Manual Running OK
1077 COMSysApp 0 Manual Stopped OK
0 CoreMessagingRegistrar 1092 Auto Running OK
```

- A. List of services stopped
- B. List of services closed recently
- C. List of services recently started
- D. List of services installed

**Correct Answer: D**

**Section:**

**QUESTION 216**

Which layer of iOS architecture should a forensics investigator evaluate to analyze services such as Threading, File Access, Preferences, Networking and high-level features?

- A. Core Services
- B. Media services
- C. Cocoa Touch
- D. Core OS

**Correct Answer: D**

**Section:**

**QUESTION 217**

Which list contains the most recent actions performed by a Windows User?

- A. MRU
- B. Activity
- C. Recents
- D. Windows Error Log

**Correct Answer: A**

**Section:**

**QUESTION 218**

Joshua is analyzing an MSSQL database for finding the attack evidence and other details, where should he look for the database logs?

- A. Model.log
- B. Model.txt
- C. Model.ldf
- D. Model.lgf

**Correct Answer: C**

**Section:**

**QUESTION 219**

What is the name of the first reserved sector in File allocation table?

- A. Volume Boot Record
- B. Partition Boot Sector
- C. Master Boot Record
- D. BIOS Parameter Block

**Correct Answer: C**

**Section:**



### QUESTION 220

What does the command "C:\>wevtutil gl " display?

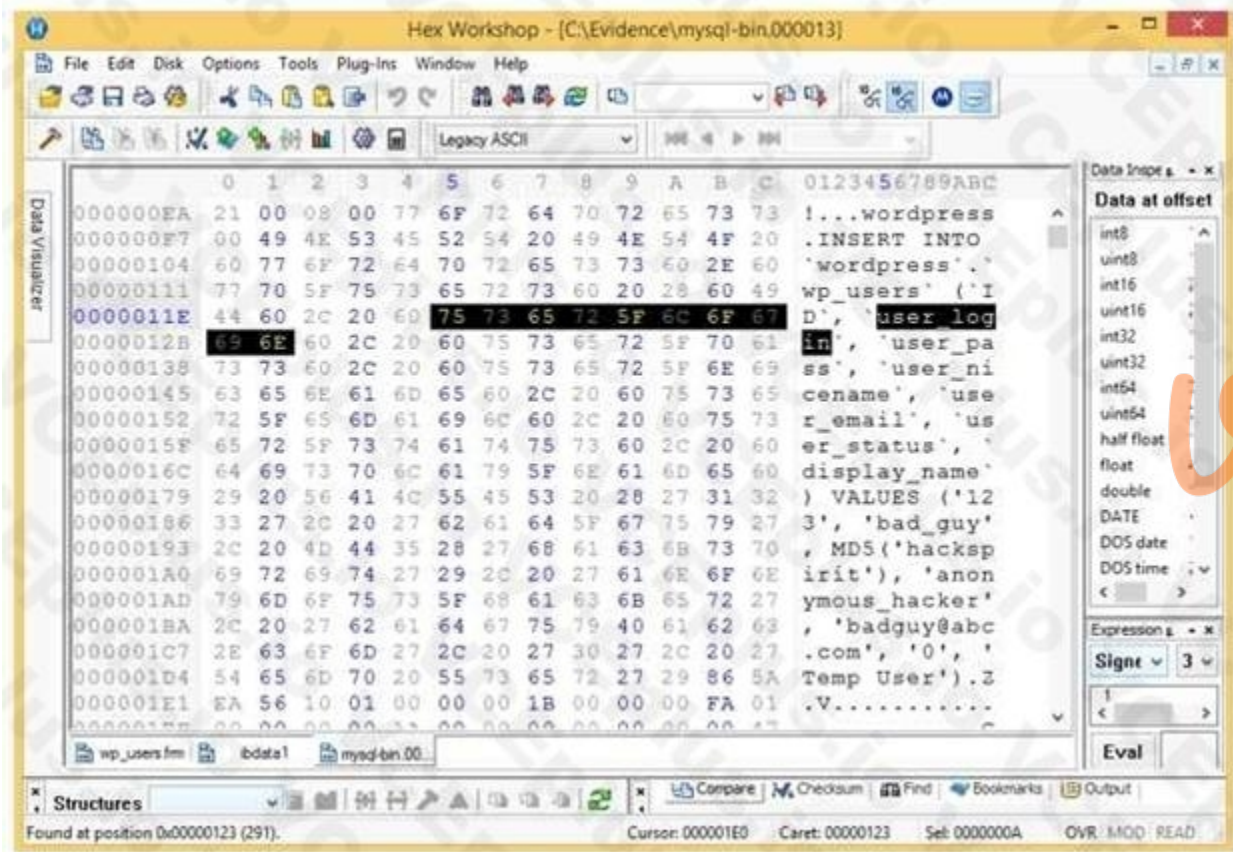
- A. Configuration information of a specific Event Log
- B. Event logs are saved in .xml format
- C. Event log record structure
- D. List of available Event Logs

**Correct Answer: A**

**Section:**

### QUESTION 221

An investigator is analyzing a checkpoint firewall log and comes across symbols. What type of log is he looking at?



- A. Security event was monitored but not stopped
- B. Malicious URL detected
- C. An email marked as potential spam
- D. Connection rejected

**Correct Answer: C**

**Section:**

### QUESTION 222

For what purpose do the investigators use tools like iPhoneBrowser, iFunBox, OpenSSHSSH, and iMazing?

- A. Bypassing iPhone passcode

- B. Debugging iPhone
- C. Rooting iPhone
- D. Copying contents of iPhone

**Correct Answer: A**

**Section:**

**QUESTION 223**

Which of the following does Microsoft Exchange E-mail Server use for collaboration of various e-mail applications?

- A. Simple Mail Transfer Protocol (SMTP)
- B. Messaging Application Programming Interface (MAPI)
- C. Internet Message Access Protocol (IMAP)
- D. Post Office Protocol version 3 (POP3)

**Correct Answer: B**

**Section:**

**QUESTION 224**

Which of the following is a precomputed table containing word lists like dictionary files and brute force lists and their hash values?

- A. Directory Table
- B. Rainbow Table
- C. Master file Table (MFT)
- D. Partition Table

**Correct Answer: B**

**Section:**

**QUESTION 225**

What is the capacity of Recycle bin in a system running on Windows Vista?

- A. 2.99GB
- B. 3.99GB
- C. Unlimited
- D. 10% of the partition space

**Correct Answer: C**

**Section:**

**QUESTION 226**

Brian needs to acquire data from RAID storage. Which of the following acquisition methods is recommended to retrieve only the data relevant to the investigation?

- A. Static Acquisition
- B. Sparse or Logical Acquisition
- C. Bit-stream disk-to-disk Acquisition
- D. Bit-by-bit Acquisition



Correct Answer: B

Section:

#### QUESTION 227

Analyze the hex representation of mysql-bin.000013 file in the screenshot below. Which of the following will be an inference from this analysis?



```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.10586]
(c) 2015 Microsoft Corporation. All rights reserved.
C:\WINDOWS\system32\C:\Users\Admin\Desktop\logonsessions\logonsessions.exe
Logonsessions v1.3
Copyright (C) 2004-2015 Mark Russinovich
Sysinternals - www.sysinternals.com

[0] Logon session 00000000:000003e7:
  User name:      WORKGROUP\RD-006$
  Auth package:  NTLM
  Logon type:    (none)
  Session:       0
  Sid:          S-1-5-18
  Logon time:    3/10/2016 3:32:46 AM
  Logon server:
  DNS Domain:
  UPN:

[1] Logon session 00000000:00000209:
  User name:
  Auth package:  NTLM
  Logon type:    (none)
  Session:       0
  Sid:          (none)
  Logon time:    3/10/2016 3:32:46 AM
  Logon server:
  DNS Domain:
  UPN:

[2] Logon session 00000000:000003e4:
  User name:      WORKGROUP\RD-006$
  Auth package:  Negotiate
  Logon type:    Service
  Session:       0
  Sid:          S-1-5-20
  Logon time:    3/10/2016 3:32:46 AM
  Logon server:
  DNS Domain:
  UPN:
```

- A. A user with username bad\_guy has logged into the WordPress web application
- B. A WordPress user has been created with the username anonymous\_hacker
- C. An attacker with name anonymous\_hacker has replaced a user bad\_guy in the WordPress database
- D. A WordPress user has been created with the username bad\_guy

Correct Answer: D

Section:

**QUESTION 228**

What technique is used by JPEGs for compression?

- A. TIFF-8
- B. ZIP
- C. DCT
- D. TCD

**Correct Answer: C**

**Section:**

**QUESTION 229**

Which of the following is found within the unique instance ID key and helps investigators to map the entry from USBSTOR key to the MountedDevices key?

- A. ParentIDPrefix
- B. LastWrite
- C. UserAssist key
- D. MRUListEx key

**Correct Answer: A**

**Section:**

**QUESTION 230**

What is the investigator trying to analyze if the system gives the following image as output?



The image shows a form for recording evidence collection details. The form has several fields with folder icons: 'Laboratory or Agency Name', 'Case Number', 'Received from (Name and Title)', 'Address and Telephone Number', 'Location from where Evidence Obtained', 'Reason Evidence Was Obtained', and 'Date and Time Evidence Was Obtained'. Below the form is a table with three columns: 'Item Number', 'Quantity', and 'Description of Item'.

Item Number	Quantity	Description of Item

- A. All the logon sessions
- B. Currently active logon sessions
- C. Inactive logon sessions

D. Details of users who can logon

**Correct Answer: B**

**Section:**

**QUESTION 231**

You need to deploy a new web-based software package for your organization. The package requires three separate servers and needs to be available on the Internet. What is the recommended architecture in terms of server placement?

- A. All three servers need to be placed internally
- B. A web server and the database server facing the Internet, an application server on the internal network
- C. A web server facing the Internet, an application server on the internal network, a database server on the internal network
- D. All three servers need to face the Internet so that they can communicate between themselves

**Correct Answer: D**

**Section:**

**QUESTION 232**

> NMAP -sn 192.168.11.200-215 The NMAP command above performs which of the following?

- A. A trace sweep
- B. A port scan
- C. A ping scan
- D. An operating system detect

**Correct Answer: C**

**Section:**

**QUESTION 233**

You are a Penetration Tester and are assigned to scan a server. You need to use a scanning technique wherein the TCP Header is split into many packets so that it becomes difficult to detect what the packets are meant for. Which of the below scanning technique will you use?

- A. Inverse TCP flag scanning
- B. ACK flag scanning
- C. TCP Scanning
- D. IP Fragment Scanning

**Correct Answer: D**

**Section:**

**QUESTION 234**

In both pharming and phishing attacks an attacker can create websites that look similar to legitimate sites with the intent of collecting personal identifiable information from its victims. What is the difference between pharming and phishing attacks?

- A. Both pharming and phishing attacks are purely technical and are not considered forms of social engineering
- B. In a pharming attack a victim is redirected to a fake website by modifying their host configuration file or by exploiting vulnerabilities in DNS. In a phishing attack an attacker provides the victim with a URL that is either misspelled or looks similar to the actual websites domain name





- C. In a phishing attack a victim is redirected to a fake website by modifying their host configuration file or by exploiting vulnerabilities in DNS. In a pharming attack an attacker provides the victim with a URL that is either misspelled or looks very similar to the actual websites domain name
- D. Both pharming and phishing attacks are identical

**Correct Answer: B**

**Section:**

**QUESTION 235**

As a Certified Ethical Hacker, you were contracted by a private firm to conduct an external security assessment through penetration testing . What document describes the specifics of the testing, the associated violations, and essentially protects both the organization's interest and your liabilities as a tester?

- A. Project Scope
- B. Rules of Engagement
- C. Non-Disclosure Agreement
- D. Service Level Agreement

**Correct Answer: B**

**Section:**

**QUESTION 236**

A company's policy requires employees to perform file transfers using protocols which encrypt traffic. You suspect some employees are still performing file transfers using unencrypted protocols because the employees don't like changes.

You have positioned a network sniffer to capture traffic from the laptops used by employees in the data ingest department. Using Wireshark to examine the captured traffic, which command can be used as a display filter to find unencrypted file transfers?

- A. tcp.port = 23
- B. tcp.port == 21
- C. tcp.port == 21 || tcp.port == 22
- D. tcp.port != 21

**Correct Answer: B**

**Section:**

**QUESTION 237**

To reach a bank web site, the traffic from workstations must pass through a firewall. You have been asked to review the firewall configuration to ensure that workstations in network 10.10.10.0/24 can only reach the bank web site 10.20.20.1 using https. Which of the following firewall rules meets this requirement?

- A. if (source matches 10.10.10.0/24 and destination matches 10.20.20.1 and port matches 443) then permit
- B. if (source matches 10.10.10.0/24 and destination matches 10.20.20.1 and port matches 80 or 443) then permit
- C. if (source matches 10.10.10.0 and destination matches 10.20.20.1 and port matches 443) then permit

**Correct Answer: A**

**Section:**

**QUESTION 238**

CompanyXYZ has asked you to assess the security of their perimeter email gateway. From your office in New York you craft a specially formatted email message and send it across the Internet to an employee of CompanyXYZ. The employee of CompanyXYZ is aware.

- A. Source code review
- B. Reviewing the firewalls configuration
- C. Data items and vulnerability scanning
- D. Interviewing employees and network engineers

**Correct Answer: A**

**Section:**

**QUESTION 239**

Jim's company regularly performs backups of their critical servers. But the company can't afford to send backup tapes to an off-site vendor for long term storage and archiving. Instead Jim's company keeps the backup tapes in a safe in the office. Jim's company is audited each year, and the results from this year's audit show a risk because backup tapes aren't stored off-site. The Manager of Information Technology has a plan to take the backup tapes home with him and wants to know what two things he can do to secure the backup tapes while in transit?

- A. Encrypt the backup tapes and use a courier to transport them.
- B. Encrypt the backup tapes and transport them in a lock box
- C. Degauss the backup tapes and transport them in a lock box.
- D. Hash the backup tapes and transport them in a lock box.

**Correct Answer: B**

**Section:**

**QUESTION 240**

As part of extracting the system data, Jenifer has used the netstat command. What does this tool reveal?

- A. Status of users connected to the internet
- B. Net status of computer usage
- C. Information about network connections
- D. Status of network hardware

**Correct Answer: C**

**Section:**

**QUESTION 241**

Which of the following files contains the traces of the applications installed, run, or uninstalled from a system?

- A. Virtual Files
- B. Image Files
- C. Shortcut Files
- D. Prefetch Files

**Correct Answer: C**

**Section:**

**QUESTION 242**

Amber, a black hat hacker, has embedded malware into a small enticing advertisement and posted it on a popular ad-network that displays across various websites. What is she doing?

- A. Malvertising



- B. Compromising a legitimate site
- C. Click-jacking
- D. Spearphishing

**Correct Answer: A**

**Section:**

**QUESTION 243**

Buffer overflow vulnerabilities, of web applications, occurs when the application fails to guard its buffer properly and allows writing beyond its maximum size. Thus, it overwrites the \_\_\_\_\_. There are multiple forms of buffer overflow, including a Heap Buffer Overflow and a Format String Attack.

- A. Adjacent buffer locations
- B. Adjacent string locations
- C. Adjacent bit blocks
- D. Adjacent memory locations

**Correct Answer: D**

**Section:**

**QUESTION 244**

Which of the following is NOT an anti-forensics technique?

- A. Data Deduplication
- B. Password Protection
- C. Encryption
- D. Steganography

**Correct Answer: A**

**Section:**

**QUESTION 245**

Select the tool appropriate for finding the dynamically linked lists of an application or malware.

- A. SysAnalyzer
- B. ResourcesExtract
- C. PEiD
- D. Dependency Walker

**Correct Answer: D**

**Section:**

**QUESTION 246**

Bob has encountered a system crash and has lost vital data stored on the hard drive of his Windows computer. He has no cloud storage or backup hard drives. He wants to recover all the data, which includes his personal photos, music, documents, videos, official emails, etc. Which of the following tools shall resolve Bob's purpose?

- A. Cain & Abel
- B. Recuva



- C. Xplico
- D. Colasoft's Capsa

**Correct Answer: B**

**Section:**

**QUESTION 247**

In a computer that has Dropbox client installed, which of the following files related to the Dropbox client store information about local Dropbox installation and the Dropbox user account, along with email IDs linked with the account?

- A. config.db
- B. install.db
- C. sigstore.db
- D. filecache.db

**Correct Answer: A**

**Section:**

**QUESTION 248**

Robert is a regional manager working in a reputed organization. One day, he suspected malware attack after unwanted programs started to popup after logging into his computer. The network administrator was called upon to trace out any intrusion on the computer and he/she finds that suspicious activity has taken place within Autostart locations. In this situation, which of the following tools is used by the network administrator to detect any intrusion on a system?

- A. Hex Editor
- B. Internet Evidence Finder
- C. Process Monitor
- D. Report Viewer

**Correct Answer: C**

**Section:**

**QUESTION 249**

What do you call the process of studying the changes that have taken place across a system or a machine after a series of actions or incidents?

- A. Windows Services Monitoring
- B. System Baselineing
- C. Start-up Programs Monitoring
- D. Host integrity Monitoring

**Correct Answer: D**

**Section:**

**QUESTION 250**

Self-Monitoring, Analysis, and Reporting Technology (SMART) is built into the hard drives to monitor and report system activity. Which of the following is included in the report generated by SMART?

- A. Power Off time
- B. Logs of high temperatures the drive has reached



- C. All the states (running and discontinued) associated with the OS
- D. List of running processes

**Correct Answer: B**

**Section:**

**QUESTION 251**

Data Files contain Multiple Data Pages, which are further divided into Page Header, Data Rows, and Offset Table. Which of the following is true for Data Rows?

- A. Data Rows store the actual data
- B. Data Rows present Page type, Page ID, and so on
- C. Data Rows point to the location of actual data
- D. Data Rows spreads data across multiple databases

**Correct Answer: B**

**Section:**

**QUESTION 252**

In Windows, prefetching is done to improve system performance. There are two types of prefetching: boot prefetching and application prefetching. During boot prefetching, what does the Cache Manager do?

- A. Determines the data associated with value EnablePrefetcher
- B. Monitors the first 10 seconds after the process is started
- C. Checks whether the data is processed
- D. Checks hard page faults and soft page faults

**Correct Answer: C**

**Section:**

**QUESTION 253**

The MAC attributes are timestamps that refer to a time at which the file was last modified or last accessed or originally created. Which of the following file systems store MAC attributes in Coordinated Universal Time (UTC) format?

- A. File Allocation Table (FAT)
- B. New Technology File System (NTFS)
- C. Hierarchical File System (HFS)
- D. Global File System (GFS)

**Correct Answer: B**

**Section:**

**QUESTION 254**

Robert, a cloud architect, received a huge bill from the cloud service provider, which usually doesn't happen. After analyzing the bill, he found that the cloud resource consumption was very high. He then examined the cloud server and discovered that a malicious code was running on the server, which was generating huge but harmless traffic from the server. This means that the server has been compromised by an attacker with the sole intention to hurt the cloud customer financially. Which attack is described in the above scenario?

- A. XSS Attack
- B. DDoS Attack (Distributed Denial of Service)



- C. Man-in-the-cloud Attack
- D. EDoS Attack (Economic Denial of Service)

**Correct Answer: B**

**Section:**

**QUESTION 255**

What is the role of Alloc.c in Apache core?

- A. It handles allocation of resource pools
- B. It is useful for reading and handling of the configuration files
- C. It takes care of all the data exchange and socket connections between the client and the server
- D. It handles server start-ups and timeouts

**Correct Answer: A**

**Section:**

**QUESTION 256**

Which of the following statements is true regarding SMTP Server?

- A. SMTP Server breaks the recipient's address into Recipient's name and his/her designation before passing it to the DNS Server
- B. SMTP Server breaks the recipient's address into Recipient's name and recipient's address before passing it to the DNS Server
- C. SMTP Server breaks the recipient's address into Recipient's name and domain name before passing it to the DNS Server
- D. SMTP Server breaks the recipient's address into Recipient's name and his/her initial before passing it to the DNS Server

**Correct Answer: C**

**Section:**

**QUESTION 257**

Which ISO Standard enables laboratories to demonstrate that they comply with quality assurance and provide valid results?

- A. ISO/IEC 16025
- B. ISO/IEC 18025
- C. ISO/IEC 19025
- D. ISO/IEC 17025

**Correct Answer: D**

**Section:**

**QUESTION 258**

Which type of attack is possible when attackers know some credible information about the victim's password, such as the password length, algorithms involved, or the strings and characters used in its creation?

- A. Rule-Based Attack
- B. Brute-Forcing Attack
- C. Dictionary Attack
- D. Hybrid Password Guessing Attack

**Correct Answer: A**

**Section:**

**QUESTION 259**

In which of these attacks will a steganalyst use a random message to generate a stego-object by using some steganography tool, to find the steganography algorithm used to hide the information?

- A. Chosen-message attack
- B. Known-cover attack
- C. Known-message attack
- D. Known-stego attack

**Correct Answer: A**

**Section:**

**QUESTION 260**

Which of these Windows utility help you to repair logical file system errors?

- A. Resource Monitor
- B. Disk cleanup
- C. Disk defragmenter
- D. CHKDSK

**Correct Answer: D**

**Section:**

**QUESTION 261**

Identify the term that refers to individuals who, by virtue of their knowledge and expertise, express an independent opinion on a matter related to a case based on the information that is provided.

- A. Expert Witness
- B. Evidence Examiner
- C. Forensic Examiner
- D. Defense Witness

**Correct Answer: A**

**Section:**

**QUESTION 262**

Steve, a forensic investigator, was asked to investigate an email incident in his organization. The organization has Microsoft Exchange Server deployed for email communications. Which among the following files will Steve check to analyze message headers, message text, and standard attachments?

- A. PUB.EDB
- B. PRIV.EDB
- C. PUB.STM
- D. PRIV.STM

**Correct Answer: B**

**Section:**



**QUESTION 263**

Which of the following information is displayed when Netstat is used with -ano switch?

- A. Ethernet statistics
- B. Contents of IP routing table
- C. Details of routing table
- D. Details of TCP and UDP connections

**Correct Answer: D**

**Section:**

**QUESTION 264**

While collecting Active Transaction Logs using SQL Server Management Studio, the query `Select * from ::fn_dblog(NULL, NULL)` displays the active portion of the transaction log file. Here, assigning NULL values implies?

- A. Start and end points for log sequence numbers are specified
- B. Start and end points for log files are not specified
- C. Start and end points for log files are specified
- D. Start and end points for log sequence numbers are not specified

**Correct Answer: B**

**Section:**

**QUESTION 265**

Which of the following statements is TRUE with respect to the Registry settings in the user start-up folder `HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\RunOnce\`.

- A. All the values in this subkey run when specific user logs on, as this setting is user-specific
- B. The string specified in the value run executes when user logs on
- C. All the values in this key are executed at system start-up
- D. All values in this subkey run when specific user logs on and then the values are deleted

**Correct Answer: D**

**Section:**

**QUESTION 266**

Which cloud model allows an investigator to acquire the instance of a virtual machine and initiate the forensics examination process?

- A. PaaS model
- B. IaaS model
- C. SaaS model
- D. SecaaS model

**Correct Answer: B**

**Section:**

**QUESTION 267**

An attacker successfully gained access to a remote Windows system and plans to install persistent backdoors on it. Before that, to avoid getting detected in future, he wants to cover his tracks by disabling the last-accessed timestamps of the machine. What would he do to achieve this?



- A. Set the registry value of HKLM\SYSTEM\CurrentControlSet\Control\FileSystem\NtfsDisableLastAccessUpdate to 0
- B. Run the command fsutil behavior set disablelastaccess 0
- C. Set the registry value of HKLM\SYSTEM\CurrentControlSet\Control\FileSystem\NtfsDisableLastAccessUpdate to 1
- D. Run the command fsutil behavior set enablelastaccess 0

**Correct Answer: C**

**Section:**

#### QUESTION 268

Which of the following web browser uses the Extensible Storage Engine (ESE) database format to store browsing records, including history, cache, and cookies?

- A. Safari
- B. Mozilla Firefox
- C. Microsoft Edge
- D. Google Chrome

**Correct Answer: C**

**Section:**

#### QUESTION 269

In which IoT attack does the attacker use multiple forged identities to create a strong illusion of traffic congestion, affecting communication between neighboring nodes and networks?

- A. Replay attack
- B. Jamming attack
- C. Blueborne attack
- D. Sybil attack

**Correct Answer: D**

**Section:**

#### QUESTION 270

Chloe is a forensic examiner who is currently cracking hashed passwords for a crucial mission and hopefully solve the case. She is using a lookup table used for recovering a plain text password from cipher text; it contains word list and brute-force list along with their computed hash values. Chloe is also using a graphical generator that supports SHA1. a. What password technique is being used? b. What tool is Chloe using?

- A. Dictionary attack b. Cisco PIX
- B. Cain & Able b. Rten
- C. Brute-force b. MScache
- D. Rainbow Tables b. Winrtgen

**Correct Answer: D**

**Section:**

#### QUESTION 271

Jacob, a cybercrime investigator, joined a forensics team to participate in a criminal case involving digital evidence. After the investigator collected all the evidence and presents it to the court, the judge dropped the case and

the defense attorney pressed charges against Jacob and the rest of the forensics team for unlawful search and seizure. What forensics privacy issue was not addressed prior to collecting the evidence?

- A. Compliance with the Second Amendment of the U.S. Constitution
- B. Compliance with the Third Amendment of the U.S. Constitution
- C. None of these
- D. Compliance with the Fourth Amendment of the U.S. Constitution

**Correct Answer: D**

**Section:**

**QUESTION 272**

Which of the following applications will allow a forensic investigator to track the user login sessions and user transactions that have occurred on an MS SQL Server?

- A. ApexSQL Audit
- B. netcat
- C. Notepad++
- D. Event Log Explorer

**Correct Answer: A**

**Section:**

