Data acquisition

1. Which of the following best describes the concept of data storage fundamentals?

A) Encrypting data
B) Storing data in the cloud
C) Methods of saving and accessing data
D) Managing digital evidence

Answer: C) Methods of saving and accessing data

2. Which type of data storage is most commonly used for large-scale, long-term data retention?

A) Cloud storage
B) USB flash drive
C) Hard drive
D) Optical disk

Answer: C) Hard drive

3. What is the main focus of cyber crimes?

A) Intellectual property protection
B) Illegal activities involving computer systems and networks
C) Data encryption
D) Cloud computing

Answer: B) Illegal activities involving computer systems and networks

4. Which of the following is NOT a common type of cyber crime?

A) Phishing
B) Hacking
C) DDoS attacks
D) Data encryption

Answer: D) Data encryption

5. Cyber forensics primarily deals with the analysis of what?

A) Financial records
B) Digital evidence
C) Physical evidence
D) Criminal behavior

Answer: B) Digital evidence

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6. What is a critical aspect of cyber forensics principles?

A) Physical security
B) Preserving digital evidence
C) Understanding hardware
D) Encrypting data

Answer: B) Preserving digital evidence

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7. What is the most important principle when dealing with digital evidence?

A) Speed of collection
B) Accuracy of data destruction
C) Chain of custody
D) Use of encrypted devices

Answer: C) Chain of custody

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8. Which of the following is NOT considered a step in digital evidence seizure?

A) Isolation of the device
B) Secure storage
C) Data encryption
D) Documenting the seizure

Answer: C) Data encryption

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9. Which of the following tools is commonly used for forensic data acquisition?

A) Antivirus software
B) Encrypted hard drive
C) Write-blocker
D) Cloud backup software

Answer: C) Write-blocker

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10. What is the role of forensic hardware tools?

A) To analyze network traffic
B) To recover and preserve digital evidence
C) To encrypt sensitive data
D) To detect malware

Answer: B) To recover and preserve digital evidence

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11. When acquiring data, which of the following actions is the most critical?

A) Making a backup copy
B) Encrypting the data
C) Ensuring no data alteration occurs
D) Analyzing the data immediately

Answer: C) Ensuring no data alteration occurs

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12. The process of securing and preserving digital evidence is called:

A) Data acquisition
B) Data analysis
C) Data seizure
D) Data destruction

Answer: A) Data acquisition

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13. What is a write-blocker used for in digital forensics?

A) Encrypting data
B) Preventing modification of data during acquisition
C) Recovering lost files
D) Analyzing encrypted data

Answer: B) Preventing modification of data during acquisition

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14. In the context of cyber forensics, what is the primary purpose of seizing digital evidence?

A) To analyze the data
B) To present it in court
C) To maintain its integrity for investigation
D) To store it in a secure location

Answer: C) To maintain its integrity for investigation

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15. Which of the following methods is NOT recommended when seizing digital evidence?

A) Documenting the seizure process
B) Handling evidence without gloves
C) Securing the device in a faraday bag
D) Labeling the evidence clearly

Answer: B) Handling evidence without gloves

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16. Which type of data storage device requires physical disconnection before evidence collection?

A) RAM
B) SSD
C) Hard drive
D) Cloud storage

Answer: C) Hard drive

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17. What type of crimes are cyber forensics used to investigate?

A) Corporate espionage
B) Intellectual property theft
C) Digital data theft
D) All of the above

Answer: D) All of the above

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18. Digital evidence seizure must always ensure which of the following?

A) Immediate analysis of data
B) Data is not modified in any way
C) Evidence is secured within a day
D) None of the above

Answer: B) Data is not modified in any way

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19. What tool is used to capture the entire content of a storage device without altering it?

A) Forensic imaging software
B) File compression software
C) Antivirus scanner
D) Data encryption tool

Answer: A) Forensic imaging software

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20. When analyzing digital evidence, what is a crucial part of maintaining its admissibility in court?

A) Anonymizing the data
B) Ensuring the integrity of the evidence
C) Encrypting the evidence
D) Sharing the evidence with the defense

Answer: B) Ensuring the integrity of the evidence

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21. What is the role of the "chain of custody" in digital forensics?

A) Ensuring the confidentiality of the data
B) Tracking the movement and handling of evidence
C) Maintaining evidence encryption
D) Ensuring evidence is analyzed quickly

Answer: B) Tracking the movement and handling of evidence

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22. Which of the following is an example of forensic hardware used in digital evidence collection?

A) Forensic imaging software
B) Write-blocker

C) Encryption software
D) Data backup tool

Answer: B) Write-blocker

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23. What is the first step in handling a digital device that is part of a crime scene?

A) Seize the device
B) Analyze the data
C) Disconnect the device from the network
D) Encrypt the data

Answer: C) Disconnect the device from the network

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24. Which of the following is an example of digital evidence?

A) A handwritten note
B) A hard drive containing files
C) A smartphone with fingerprints
D) A witness statement

Answer: B) A hard drive containing files

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25. Forensic software is primarily used for what purpose?

A) Preventing data loss
B) Recovering deleted files
C) Encrypting communication
D) Backing up data to cloud storage

Answer: B) Recovering deleted files

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26. What is the main challenge in investigating cyber crimes?

A) Lack of legal jurisdiction
B) The speed at which data can be manipulated
C) Difficulty in finding witnesses
D) Inadequate hardware tools

Answer: B) The speed at which data can be manipulated

27. What is the difference between a forensic copy and a regular backup?

A) A forensic copy is a bit-by-bit duplicate, while a backup may skip certain files
B) A forensic copy is encrypted, while a backup is not
C) A forensic copy is stored on the cloud
D) There is no difference between the two

Answer: A) A forensic copy is a bit-by-bit duplicate, while a backup may skip certain files

28. Which of the following is NOT a part of the digital evidence preservation process?

A) Creating a forensic copy
B) Storing evidence on a personal device
C) Using write-blockers
D) Ensuring the evidence remains unaltered

Answer: B) Storing evidence on a personal device

29. What does a digital forensics investigator do when they find evidence of a cyber crime?

A) Encrypt the evidence
B) Report the findings to authorities
C) Delete the evidence
D) Analyze the evidence immediately

Answer: B) Report the findings to authorities

30. Which of the following tools would be used for analyzing digital evidence from a smartphone?

A) FTK Imager
B) Wireshark
C) Cellebrite UFED
D) EnCase

Answer: C) Cellebrite UFED

31. What is a write-blocker used for in forensic investigations?

A) To read data faster
B) To prevent data from being altered during examination
C) To encrypt data
D) To store the evidence securely

Answer: B) To prevent data from being altered during examination

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32. When collecting digital evidence, what is the first consideration to ensure its integrity?

A) Secure the device physically
B) Encrypt the data immediately
C) Disconnect from the internet
D) Analyze the data as soon as possible

Answer: A) Secure the device physically

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33. What is a primary factor in maintaining the integrity of digital evidence?

A) Storing the evidence in multiple locations
B) Documenting all actions taken with the evidence
C) Encrypting the evidence before examination
D) Performing real-time analysis

Answer: B) Documenting all actions taken with the evidence

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34. What should be done with a digital device that is suspected of being involved in a crime?

A) The device should be immediately turned off
B) The device should be analyzed on-site
C) The device should be disconnected from networks and transported securely
D) The device should be encrypted and analyzed

Answer: C) The device should be disconnected from networks and transported securely

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35. When is it appropriate to analyze digital evidence?

A) Immediately after collection
B) After securing and documenting it
C) After copying the data to a personal device
D) As soon as it is in the investigator’s hands

Answer: B) After securing and documenting it

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36. What is the primary goal of cyber forensics?

A) To prevent cyber crimes
B) To recover data from damaged devices
C) To identify and preserve digital evidence of criminal activity
D) To analyze network traffic

Answer: C) To identify and preserve digital evidence of criminal activity

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37. What is a key requirement for forensic imaging?

A) The image must be encrypted
B) The image must be a bit-by-bit copy of the original device
C) The image must include network data
D) The image must be stored on a personal cloud account

Answer: B) The image must be a bit-by-bit copy of the original device

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38. Which of the following is an example of forensic hardware used to extract data from a damaged device?

A) Forensic software
B) Write-blocker
C) JTAG tool
D) Cloud backup tool

Answer: C) JTAG tool

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39. What is the purpose of creating a chain of custody in digital forensics?

A) To document the handling and storage of evidence
B) To prevent the modification of data
C) To recover deleted files
D) To encrypt sensitive information

Answer: A) To document the handling and storage of evidence

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40. Which of the following best describes cyber forensics?

A) Collecting data from the cloud
B) Investigating cyber crimes with digital evidence
C) Backing up sensitive files
D) Encrypting network traffic

Answer: B) Investigating cyber crimes with digital evidence

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41. Which is NOT a component of forensic hardware tools?

A) Write-blocker
B) Forensic imaging tool
C) Digital analysis software
D) Antivirus software

Answer: D) Antivirus software

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42. What role does forensic software play in cyber forensics?

A) It helps in encrypting data
B) It prevents malware from spreading
C) It assists in recovering and analyzing digital evidence
D) It stores data securely

Answer: C) It assists in recovering and analyzing digital evidence

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43. Which of the following should NOT be used on a device containing potential digital evidence?

A) Write-blocker
B) Data analysis software
C) Antivirus software
D) Encryption tool

Answer: C) Antivirus software

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44. When handling digital evidence, what is the priority to ensure legal acceptance?

A) Encrypt the data immediately
B) Ensure a clear chain of custody is maintained
C) Analyze the data in an isolated environment
D) Store the evidence on a personal device

Answer: B) Ensure a clear chain of custody is maintained

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45. What is the best way to ensure digital evidence remains unaltered during investigation?

A) Use data compression tools
B) Use a write-blocker to prevent modifications
C) Encrypt all the evidence
D) Share the evidence with other investigators

Answer: B) Use a write-blocker to prevent modifications

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46. Which of the following could be a type of digital evidence in cyber forensics?

A) A password-protected file
B) A system image
C) A text message
D) All of the above

Answer: D) All of the above

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47. What is a key consideration when selecting forensic tools for data acquisition?

A) The speed of the tool
B) The tool’s ability to ensure data integrity
C) The cost of the tool
D) The ability of the tool to recover deleted files

Answer: B) The tool’s ability to ensure data integrity

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48. Which of the following is the most important to maintain when handling digital evidence?

A) Fast analysis
B) Evidence integrity
C) Encryption of the device
D) Network connectivity

Answer: B) Evidence integrity

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49. What is an essential characteristic of a forensic hardware tool used for data acquisition?

A) It should be able to encrypt data
B) It should only be used by experts
C) It should ensure the original data is not altered
D) It should be able to repair damaged devices

Answer: C) It should ensure the original data is not altered

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50. What is one of the major risks in handling digital evidence improperly?

A) Data encryption may be compromised
B) The evidence could become inadmissible in court
C) The device may be damaged
D) The crime may go unreported

Answer: B) The evidence could become inadmissible in court
