

Chapter 01 *Introduction and Overview of Computer Forensics and Cybercrime*

Multiple Choice: Choose the one alternative that best completes the statement or answers the question.

1. Which of the following is true of the Digital Revolution?
- a. It has prompted private citizens to embrace sophisticated measures of cyberprotection.
 - b. It has eliminated vulnerabilities of government institutions and personal residences.
 - c. It has resulted in decreased interconnectivity.
 - d. It has created a new forum for both terrorist activity and criminal behavior.

Answer: d

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 5

Level: Difficult

2. Which of the following has been characterized as “a social networking site on steroids”?
- a. Second Life
 - b. Love Bug
 - c. CERT
 - d. Electronic Frontier Foundation

Answer: a

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 5

Level: Intermediate

3. The Electronic Frontier Foundation (EFF) was created by _____.
- a. John Edward Robinson and William Gibson
 - b. John Barlow and John Gilmore
 - c. John Barlow and William Gibson
 - d. John Gilmore and John Edward Robinson

Answer: b

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 4

Level: Intermediate

4. _____ has traditionally encompassed abuses and misuses of computer systems or computers connected to the Internet, resulting in direct and concomitant losses.
- a. Digital crime
 - b. Computer-related crime
 - c. Cybercrime
 - d. Computer crime

Answer: c

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 5
Level: Intermediate

5. _____ includes any criminal activity which involves the unauthorized access, dissemination, manipulation, destruction, or corruption of electronically stored data.
- a. Cybercrime
 - b. Computer related crime
 - c. Computer crime
 - d. Digital crime

Answer: d

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 5
Level: Basic

6. Which is one of the earliest computer crimes to have been committed?
- a. software piracy
 - b. DDoS attack
 - c. phishing
 - d. hacking

Answer: a

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 6
Level: Intermediate

7. Which of the following allows perpetrators to commit multinational cybercrime with little fear of judicial sanctions?
- a. the presence of traditional jurisdictional demarcations
 - b. the lack of physical boundaries
 - c. an extensive array of equipment or tools
 - d. the widespread acceptance of world passports

Answer: b

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 7–8
Level: Difficult

8. Which of the following, according to a study conducted by the Department of Justice, were perceived as the number one target for computer crime?
- a. financial institutions
 - b. individuals
 - c. businesses
 - d. educational institutions

Answer: c

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 9

Level: Intermediate

9. Which of the following is NOT a problem in the investigation of cybercrime?
- a. perceived insignificance of cybercrime
 - b. prosecutorial reluctance to pursue cyber criminals
 - c. untrained investigators
 - d. a widespread perception of cybercrime as worse than “traditional” crime

Answer: d

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 8

Level: Difficult

10. Which of the following is NOT a reason why many businesses and corporations underreport computer crimes?
- a. consumers don’t care about confidentiality
 - b. exposure to financial losses
 - c. data breach liabilities
 - d. damage to brand

Answer: a

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 10

Level: Intermediate

11. Which of the following is a valid reason why a corporation might welcome federal assistance to help catch a cyber criminal?
- a. Government investigations of corporate cybercrime can boost consumer/client confidence.
 - b. Criminals access different services to disguise their location.
 - c. The U.S. judicial system lets corporations hide the results of law enforcement investigations.
 - d. Government agencies have the advantage of being able to ignore the chain of custody.

Answer: b

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 11

Level: Difficult

12. Corporations and private entities that offer discounts on software or training to law enforcement agencies are called _____.
- a. nerds or geeks
 - b. forensic predators

- c. friendly vendors
- d. electronic purses

Answer: c

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 12–13

Level: Difficult

13. Expenditures on which area represent a nonrecurring expense for a computer crime unit?

- a. staffing
- b. training
- c. acquiring and updating equipment
- d. establishing a computer laboratory

Answer: d

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 12–14

Level: Intermediate

14. Traditionally, trial and appellate courts evaluated the constitutionality of computer crime statutes, searches, and investigations through the lens of the _____.

- a. First and Fourth Amendments
- b. First and Second Amendments
- c. Second and Third Amendments
- d. Third and Fourth Amendments

Answer: a

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 14

Level: Intermediate

15. What did the Fifth Circuit Court of Appeals rule in *U.S. v. Finley*?

- a. The post-arrest search of a suspect's cell phone was unconstitutional.
- b. The post-arrest search of a suspect's cell phone was constitutional.
- c. The pre-arrest search of a suspect's cell phone was unconstitutional.
- d. The pre-arrest search of a suspect's cell phone was constitutional.

Answer: b

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 15

Level: Intermediate

16. Which of the following is an example of computer-initiated criminal activity?

- a. spreading viruses
- b. stealing home addresses
- c. wire transfers

d. spamming

Answer: c

Objective: Examine the extent of computer crime in society.

Page number: 17

Level: Intermediate

17. All the following are categories into which computer crimes are traditionally divided EXCEPT _____.

a. computer as an instrument

b. computer as a target

c. computer as an incidental

d. computer as a weapon

Answer: d

Objective: Examine the extent of computer crime in society.

Page number: 17

Level: Basic

18. One of the earliest examples of computer crime is _____, which consists of an activity in which telecommunications systems are manipulated and ultimately compromised.

a. phreaking

b. spamming

c. hacking

d. cracking

Answer: a

Objective: Examine the extent of computer crime in society.

Page number: 17

Level: Intermediate

19. Which of the following is NOT a payment mechanism that poses a problem for law enforcement?

a. prepaid cards

b. banker's drafts

c. mobile payments

d. electronic purses

Answer: b

Objective: Familiarize yourself with the categorization of computer-related crime.

Page number: 20

Level: Intermediate

20. Which of the following involves payments that rely on a bank account and a web-based transfer of funds to or from an established financial account?

a. closed system cards

b. digital precious metals

c. Internet payment services

d. stored value cards

Answer: c

Objective: Familiarize yourself with the categorization of computer-related crime.
Page number: 20
Level: Intermediate

21. PayPal is an example of a(n) _____.
a. digital precious metal
b. prepaid card
c. stored value card
d. Internet payment service

Answer: d

Objective: Familiarize yourself with the categorization of computer-related crime.
Page number: 20
Level: Intermediate

22. Which of the following characteristics of new payment methods has facilitated money laundering and terrorist financing?
a. anonymity in transactions
b. increased competition
c. lower cost
d. lower interest rates

Answer: a

Objective: Familiarize yourself with the categorization of computer-related crime.
Page number: 20
Level: Difficult

23. Closed system cards and open system cards are two primary types of _____.
a. stored value cards
b. prepaid cards
c. digital precious metals
d. mobile payments

Answer: b

Objective: Familiarize yourself with the categorization of computer-related crime.
Page number: 20
Level: Intermediate

24. Which of the following e-payment methods stores funds on an integrated circuit chip in the card?
a. mobile payment
b. prepaid card
c. stored value card
d. Internet payment

Answer: c

Objective: Familiarize yourself with the categorization of computer-related crime.
Page number: 20
Level: Intermediate

25. Which payment method is typically associated with a card payment network such as Visa or MasterCard?

- a. digital precious metals
- b. mobile payment
- c. electronic purse
- d. prepaid card

Answer: d

Objective: Familiarize yourself with the categorization of computer-related crime.

Page number: 20

Level: Intermediate

True/False: Write ‘T’ if the statement is true and ‘F’ if the statement is false.

1. Law enforcement has been threatened and weakened by the advent of the Internet and has not been able to benefit from it.

Answer: False

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 2

Level: Basic

2. Increasing dependence on cyber information is one of the disadvantages of the Internet.

Answer: True

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 3

Level: Intermediate

3. The quality of information found on the Internet is often questionable.

Answer: True

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 3

Level: Basic

4. Cyberspace is the indefinite place where individuals transact and communicate.

Answer: True

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 3

Level: Intermediate

5. Cybercrime has been defined as any criminal act in which a computer is involved, even peripherally.

Answer: False

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 5
Level: Intermediate

6. The Information or Digital Revolution has exacerbated the vulnerabilities of government institutions and personal residences alike.

Answer: True

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 5
Level: Intermediate

7. Much computer-related crime involves specialist users.

Answer: False

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 6
Level: Basic

8. The lack of physical boundaries and the removal of traditional jurisdictional demarcations allow perpetrators to commit multinational crime with little fear of judicial sanctions.

Answer: True

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 7
Level: Intermediate

9. Investigators and administrators have displayed a zealous commitment to pursuing computer criminals.

Answer: False

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 8
Level: Difficult

10. Corporations may underreport cybercrimes because of concerns about data breach liabilities, damage to brand, regulatory issues, and loss of consumer confidence.

Answer: True

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 10
Level: Intermediate

11. Expenditures on a computer laboratory represent a recurring expense for an agency's budget.

Answer: False

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 14
Level: Intermediate

12. The Supreme Court has displayed a keen interest in deciding matters of law in the newly emerging sphere of cyberspace.

Answer: False

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 14
Level: Intermediate

13. Phreaking is an activity in which telecommunications systems are manipulated and ultimately compromised.

Answer: True

Objective: Examine the extent of computer crime in society.

Page number: 17
Level: Intermediate

14. Spamming cannot be considered a computer crime.

Answer: False

Objective: Examine the extent of computer crime in society.

Page number: 17
Level: Intermediate

15. Electronic purses come in two primary types: limited or closed, and multipurpose or open.

Answer: False

Objective: Familiarize yourself with the categorization of computer-related crime.

Page number: 20
Level: Intermediate

Fill in the Blank: Write the word or phrase that best completes each statement or answers the question.

1. The introduction of the _____ has created unparalleled opportunities for commerce, research, education, entertainment, and public discourse.

Answer: Internet

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 2
Level: Basic

2. The Internet has monumentally increased the _____ of the virtual world, outpaced only by the exponential growth in the number of users.

Answer: physicality

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 3

Level: Intermediate

3. Barlow and Gilmore created the _____ to demonstrate that the Secret Service had conducted itself in an arbitrary, oppressive, and unconstitutional manner.

Answer: Electronic Frontier Foundation (EFF)

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 5

Level: Intermediate

4. _____ includes any criminal activity that involves the unauthorized access, dissemination, manipulation, destruction, or corruption of electronically stored data.

Answer: Digital crime

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 5

Level: Intermediate

5. The lack of _____ and the removal of traditional jurisdictional demarcations allow perpetrators to commit multinational crime with little fear.

Answer: physical boundaries

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 7

Level: Intermediate

6. The Supreme Court has refused to determine appropriate levels of _____ protections of individuals and computer equipment.

Answer: Fourth Amendment

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 14

Level: Intermediate

7. In addition to costs associated with training, administrators must consider three additional areas in support of computer crime investigations: _____.

Answer: personnel, hardware, and housing

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 14–15

Level: Intermediate

8. _____, an activity in which telecommunications systems are manipulated and ultimately compromised, was the precursor to today's hacking.

Answer: Phreaking

Objective: Examine the extent of computer crime in society.

Page number: 17
Level: Intermediate

9. The most disconcerting of all computer crime involves the sexual exploitation of _____.

Answer: children

Objective: Examine the extent of computer crime in society.

Page number: 19
Level: Intermediate

10. _____ purpose cards may be used only for a finite number of purposes, and are issued by a particular merchant, telecommunications provider, or transit company.

Answer: Limited

Objective: Familiarize yourself with the categorization of computer-related crime.

Page number: 20
Level: Intermediate

11. Unlike magnetic strips, which store only account information, a _____ stores funds on an integrated circuit chip.

Answer: stored value card

Objective: Familiarize yourself with the categorization of computer-related crime.

Page number: 20
Level: Intermediate

12. The rationale for _____ involves the avoidance of currency fluctuation and foreign exchange.

Answer: digital precious metals

Objective: Familiarize yourself with the categorization of computer-related crime.

Page number: 21
Level: Intermediate

13. One of the first examples of the international havoc that malware could wreak involved the _____ virus.

Answer: Love Bug

Objective: Examine the extent of computer crime in society.

Page number: 19
Level: Intermediate

14. _____ have historically been divided into three categories: computer as a target, computer as an instrument, and computer as an incidental.

Answer: Computer crimes

Objective: Examine the extent of computer crime in society.

Page number: 17
Level: Intermediate

15. Stealing home addresses, maps, or family information is classified as _____ criminal activity.

Answer: computer-assisted

Objective: Examine the extent of computer crime in society.

Page number: 16–17

Level: Intermediate

Matching:

1. Match the following crimes with their definitions.

1. Computer crime	a. It encompasses abuses and misuses of computer systems or computers connected to the Internet that result in direct and/or concomitant losses.
2. Cyber crime	b. It is defined as any criminal act in which a computer is involved, even peripherally.
3. Digital crime	c. A generic term that denotes any criminal act, both Internet and non-Internet activity, which has been facilitated by computer use, and includes theft of components, counterfeiting, digital piracy or copyright infringement, hacking, and child pornography.
4. Phreaking	d. It includes any criminal activity that involves the unauthorized access, dissemination, manipulation, destruction, or corruption of electronically stored data.
5. Computer-related crime	e. It is a criminal activity in which telecommunications systems are manipulated and ultimately compromised.

Answer:

- 1. c
- 2. a
- 3. d
- 4. e
- 5. b

Objectives: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet; Examine the extent of computer crime in society.

Page number: 5–6, 17

Level: Intermediate

2. Match the following e-payment methods with their descriptions.

6. Limited purpose cards	a. Their value is stored electronically on the device via an integrated circuit chip.
7. Stored value cards	b. They are used for a wide range of purposes, may cross geographic boundaries, and may be used by any user.
8. Internet payment services	c. They are used only for a finite number of purposes, and are issued by a particular merchant, telecommunications provider, or transit company.
9. Prepaid cards	d. They involve payments that rely on a bank account and use the Internet as a means of transferring funds to or from an established financial account.
10. Open system cards	e. They are attached to an account and they provide access to monetary funds that are paid in advance by the cardholder.

Answer:

- 6. c
- 7. a
- 8. d
- 9. e

10. b

Objective: Familiarize yourself with the categorization of computer-related crime.

Page Number: 20–21

Level: Intermediate

Essay: Write your answer in the space provided or on a separate sheet of paper.

1. Discuss how the Internet has revolutionized law enforcement in society. What are the advantages and disadvantages of the Internet?

The answer should include the following points:

- Unparalleled opportunities for commerce, research, education, entertainment, and public discourse
- Emergence of a global marketplace

Advantages

- Creation of a nonthreatening platform for information exchange by community residents
- Speed and efficiency

Disadvantages

- Increasing dependence on cyber information
- Poor quality of information
- Prevalence of criminal behavior and exchange of visual or informational contraband

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 2–3

Level: Intermediate

2. What is cyberspace? Discuss various terms that pertain to criminal behavior involving computers.

The answer should include the following points:

- Indefinite place where individuals transact and communicate
- Computer crime
- Computer-related crime
- Cybercrime
- Digital crime

Objective: Explore the changes in society associated with the advent of technological changes and the introduction of the Internet.

Page number: 3–6

Level: Intermediate

3. Evaluate some of the innovative payment mechanisms that can be targeted by cyber criminals.

The answer should include the following points:

- Prepaid cards
- Stored value cards
- Mobile payments
- Internet payment services
- Digital precious metals

Objective: Familiarize yourself with the categorization of computer-related crime.

Page number: 20–21

Level: Intermediate

Critical Thinking: Write your answer in the space provided or on a separate sheet of paper.

1. Discuss whether the law enforcement community has been able to handle computer crimes effectively in society. Briefly describe some of the problems faced by the police in the enforcement and prosecution of computer crimes.

The answer should include the following points:

- Individuals seeking crime display a remarkable ability to adapt to changing technologies, environments, and lifestyles
- Law enforcement is at a disadvantage and is struggling to keep up with criminal innovations

Problems:

- Physicality and jurisdictional concerns
- Perceived insignificance, stereotypes, and incompetence
- Prosecutorial reluctance
- Lack of reporting
- Lack of resources
- Jurisprudential inconsistency

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 6–16

Level: Difficult

2. Assess the problem of lack of resources for the law enforcement community. How, in your opinion, should they respond to this problem?

The answer should include the following points:

Financial assistance needed for:

- Training
- Personnel, hardware, housing
- Acquisition of appropriate equipment
- Updating and upgrading
- Creation of computer laboratory

Objective: Identify the challenges associated with the enforcement and prosecution of computer crime.

Page number: 11–14

Level: Difficult