

Name (print): STUDENT NAME

- **INTEGRITY:** By taking this exam, you pledge that this is your work and you have neither given nor received inappropriate help during the taking of this exam in compliance with the Academic Honor Code of Georgia Tech. Do NOT sign nor take this exam if you do not agree with the honor code.
- **DEVICES:** If your cell phone, pager, PDA, beeper, iPod, or similar item goes off during the exam, you will lose 10 points on this exam. Turn all such devices off and put them away now. You cannot have them on your desk.
- **ACADEMIC MISCONDUCT:** Academic misconduct will not be tolerated. You are to uphold the honor and integrity bestowed upon you by the Georgia Institute of Technology. Violations will be referred to the Office of Student Integrity.
  - Keep your eyes on your own paper.
  - Do your best to prevent anyone else from seeing your work.
  - Do NOT communicate with anyone other than a proctor for ANY reason in ANY language in ANY manner.
  - Do NOT share ANYTHING during the exam. (This includes no sharing of pencils, paper, erasers).
  - Follow directions given by the proctor(s).
  - Stop all writing when told to stop. Failure to stop writing on this exam when told to do so is academic misconduct.
  - Do not use notes, books, calculators, etc during the exam.
- **TIME:** Don't get bogged down by any one question. Note that this exam has 100 total points. You should use the number of points on a problem as the approximate time you should spend on it. This exam has 13 questions on 15 pages including the title page. Please check to make sure all pages are included. You will have 1 hour and 45 minutes to complete this exam.

*I commit to uphold the ideals of honor and integrity by refusing to betray the trust bestowed upon me as a member of the Georgia Tech community. I have also read and understand the requirements outlined above.*

Signature: \_\_\_\_\_

---

Question	Points	Score
1	12	
2	6	
3	9	
4	6	
5	4	
6	6	
7	4	
8	6	
9	6	
10	8	
11	8	
12	10	
13	15	
Total:	100	

1. (12 points)

Multiple Choice. Circle the correct answer for each question.

- (a) [1 pt] “Informational privacy” refers to
- A. Freedom from physical intrusion
  - B. Freedom from interference in one’s personal affairs
  - C. One’s ability to change their personal information
  - D. Concerns affecting access to and control of personal information
- (b) [1 pt] Which is NOT one of the four different characteristics a moral system should have?
- A. Public
  - B. Rational
  - C. Informal enforcement
  - D. Legal
  - E. Impartial
- (c) [1 pt] Which is a consequentialist ethical framework?
- A. Deontological framework
  - B. Rights-based framework
  - C. Utilitarian framework
  - D. None of the above
- (d) [1 pt] What is the textbook definition for cyberethics?
- A. Ethical issues regarding the flow of information that is either enhanced or restricted by the flow of computer technology.
  - B. Evaluates the social policies and laws that have been framed in response to issues generated by the development and use of cyber technologies.
  - C. Ethical issues associated with computing machines and computing professionals.
  - D. Concerns networked information and computer communication devices and systems.
- (e) [1 pt] In Chapter 2 of the textbook, the author identifies 4 common forms of ethical discussion stoppers, which of the following was not one of the discussion stoppers mentioned?
- A. Morality is a personal and private decision
  - B. Morality is universal we all believe in it so why bother discussing it
  - C. It’s wrong for me to judge another person or to impose my beliefs on them
  - D. Morality is a cultural or religious system of belief

- (f) [1 pt] Under which type of ethical theory does act-deontology belong?
- A. Duty-based
  - B. Contract-based
  - C. Character-based
  - D. Consequence-based
- (g) [1 pt] Existing privacy laws do little to protect people from data mining because they do not cover:
- A. Electronic records in the database.
  - B. Personal information that is implicit in the data.
  - C. Data exchanged between or across databases.
  - D. Data which is confidential in nature (medical, financial, academic)
- (h) [1 pt] In the article “Hacking the Hill,” hackers infiltrated a number of computers and networks in the US House of Representatives. This instance of hacking can be considered an act of:
- A. Information Warfare
  - B. Cyberterrorism
  - C. Hacktivism
  - D. Activism
- (i) [1 pt] In the article, “Heartland Payment System Data Breach,” several cybersecurity breaches were mentioned. Which of the following breaches was the **original** breach which led to the data loss?
- A. Personnel Breach
  - B. System Breach
  - C. Network Breach
  - D. Cash register transaction
- (j) [1 pt] In the video on the TJX data breach, hackers were able to infiltrate TJX’s computer for over a year and a half and steal over 100 million credit cards and hit 2400 stores. Besides the amount of money lost, what made this story newsworthy?
- A. TJX collected too much information
  - B. TJX kept the information too long
  - C. TJX didn’t store data according to appropriate security standards
  - D. TJX did not have proper wireless network security

- (k) [1 pt] A public revelation of private information meant to call attention to negligence, abuses, or dangers that threaten public interest is called:
- A. Public Dissent
  - B. Justifiable Gossip
  - C. Whistle Blowing
  - D. Gross Treason
- (l) [1 pt] An ethical issue that applies to personal relationships between individual professionals and other individuals such as clients is a:
- A. Microethical issue
  - B. Macroethical issue
  - C. Accountability issue
  - D. Value Sensitive Design issue

2. (6 points)

True/False. Write the word "True" or "False" to indicate your answer.

- (a) [1 pt] Data mining is not not considered an invasion of privacy because it is not personal data that resides in a database rather it is new facts, relationships, or associations about a person.
- (a) \_\_\_\_\_
- (b) [1 pt] The standard form of an argument is to list the premises first and then the conclusion.
- (b) \_\_\_\_\_
- (c) [1 pt] An argument does not qualify as a strong argument if its premises are weak, even if it has a premise and a conclusion that is convincing.
- (c) \_\_\_\_\_
- (d) [1 pt] In a *naturally private* situation, privacy can be lost but not violated.
- (d) \_\_\_\_\_
- (e) [1 pt] According to Bernard Gert, morality is a system whose purpose is to prevent harm and evil.
- (e) \_\_\_\_\_
- (f) [1 pt] A computer scientist is considered a professional like a civil engineer, doctor, or lawyer.
- (f) \_\_\_\_\_

## 3. (9 points)

Matching: Match each logical fallacy to its definition. Choose the **best** definition for each fallacy.

Types of Fallacies:

- |                                 |           |
|---------------------------------|-----------|
| (a) [1 pt] Ad Hominem           | (a) _____ |
| (b) [1 pt] Slippery Slope       | (b) _____ |
| (c) [1 pt] Appeal to Authority  | (c) _____ |
| (d) [1 pt] Appeal to the people | (d) _____ |
| (e) [1 pt] False Cause          | (e) _____ |
| (f) [1 pt] Begging the Question | (f) _____ |
| (g) [1 pt] Division             | (g) _____ |
| (h) [1 pt] Many/Any             | (h) _____ |
| (i) [1 pt] Virtuality           | (i) _____ |

Descriptions

- Many items of a certain kind, A, have property B. Therefore, any item of the kind A has B.
- Argument that reasons that since X proceeds Y, X is the cause of Y
- Appeal to the notion that anything an expert says is correct
- Infers that the same attributes or characteristics that apply to the whole group must also apply to every part of the whole or every member of the group.
- An argument whose premise(s) presume the truth of the conclusion
- An argument that attacks a person rather than the substance of their argument
- Claims that because something happens in a “virtual space” it has no impact on the real world.
- X is popular. Therefore, X must be an acceptable standard.
- X could possibly be abused; therefore, we should not allow X

4. (6 points)

Short answers: your answers to these questions should be no more than 1-3 sentences.

(a) [2 pts] What is the key difference between a virus and a worm?

(b) [2 pts] What is the difference between hacktivism and cyberterrorism?

(c) [2 pts] Give an argument why Active Defense, or “Hacking Back,” is not morally justified.

5. (4 points)

Describe a scenario where breaking into a computer could be ethically justified. Under what ethical framework would this scenario be considered ethical and why?

6. (6 points)

In your textbook, there is a distinction made between “true” cybercrime and crimes which are assisted or exacerbated by cybertechnology. Name the three types of “true” cybercrime and give a brief example of each.

7. (4 points)

Consider the following argument:

*Premise 1:* Seventy-five percent of people who own Macs also own a iPod.

*Premise 2:* My roommate currently owns a Mac.

*Conclusion:* My roommate also owns an iPod.

(a) [2 pts] Is this argument valid? If it is not, what logical fallacy does it make?

(b) [2 pts] Is this argument strong or weak? (Justify your answer)

8. (6 points)

Define Data, System, and Network security and provide an example of each.

9. (6 points)

As discussed in class, Richard Epstein believes that security can be viewed in terms of three key elements. Without all three you lack security. Name them and give a brief definition for each.

10. (*8 points*)

The introduction of “cybertechnology” has had four major impacts on privacy. What are these impacts, and give an example of how each has affected privacy.

11. (*8 points*)

List and describe at least **four** of the six tenants of “Hacker Ethics” as described by Steven Levy.

12. (10 points)

Consider the following scenario:

You have been asked to observe how data-entry clerks use new accounting software at a large accounting firm. As part of an observational study, the clerks are informed that they will remain anonymous. You install logging software on several clerks' computers, and your analysis of these logfiles reveals that many of the clerks are making a particular data entry error when using the new software. These errors will cause the firm to lose money, and company policy clearly dictates that workers salaries will be docked for mistakes leading to loss of company profit. You report the problem with the new software package to your boss. Your boss demands that you turn over your log files so the company can follow-up with more training for the employees and ensure that the company is reimbursed for the errors from the employees' pay.

(a) [5 pts] Identify an ethical framework and use it to argue why you **should NOT** turn over the logfiles to your boss.

(b) [5 pts] Identify an ethical framework and use it to argue why you **should** turn over

the logfiles to your boss.

13. (15 points)

According to Richard De George, the three conditions that must be satisfied before an engineer is morally permitted to “blow the whistle” are:

- 1.
- 2.
- 3.

In addition, if the following two conditions are satisfied, the engineer is morally **required** to “blow the whistle”:

- 4.
- 5.

Army Specialist Bradley Manning is being detained on suspicion of passing a secret video of a US Army helicopter gunning down civilians in Iraq to the whistle-blower website WikiLeaks. With respect to **only** the leak of this video, which of the above conditions were met? And which were not? For each condition, explain why or why not. If you feel there is not enough information to make a determination, state what other information you would need to make a decision.

- Condition 1:

- Condition 2:

- Condition 3:

- Condition 4:

- Condition 5: