

KATHMANDU UNIVERSITY
End Semester Examination
February, 2025

Marks Scored:

Level : B.E./B.Sc.
Year : III

Course : COMP 343
Semester : II

Exam Roll No. : _____ Time: 30 mins.

F. M. : 10

Registration No.: _____

Date : 18 FEB 2025

SECTION "A"

[20 Q. × 0.5 = 10 marks]

Choose and encircle the most appropriate option from each set of choices

1. Which of the following best describes the role of ethics in information systems?
 - a. Ensuring the system runs efficiently without errors
 - b. Protecting the rights and privacy of users while promoting fairness and accountability
 - c. Maximizing the profitability of technology companies
 - d. Creating faster and more powerful computer algorithms

2. What is the primary ethical concern related to data privacy in information systems?
 - a. Ensuring the software is user-friendly
 - b. Preventing unauthorized access and misuse of personal information
 - c. Increasing the speed and connectivity of the information systems
 - d. Enhancing the user interface of applications

3. Which of the following ethical responsibilities is most relevant for IT workers when handling sensitive corporate data?
 - a. Ensuring the company's competitive advantage at all costs
 - b. Sharing information with trusted third parties to improve system efficiency
 - c. Maintaining confidentiality, integrity, and availability of the data
 - d. Encouraging open access to all company data for transparency

4. An IT user discovers a vulnerability in a company's information system that could be exploited for personal gain. What is the most ethically appropriate course of action?
 - a. Exploit the vulnerability discreetly to avoid detection
 - b. Ignore the issue, as reporting it could create unwanted complications
 - c. Inform the company's IT department or security team immediately
 - d. Publicly disclose the vulnerability to pressure the company into fixing it

5. Which of the following is an example of a social engineering attack in computer crime?
 - a. Using a brute-force algorithm to crack a password
 - b. Sending a phishing email to trick a user into revealing their login credentials
 - c. Infecting a computer with a virus through a USB drive
 - d. Developing a firewall to block unauthorized access

6. All of the following are technical solutions to protecting user privacy except:
 - a. email encryption.
 - b. data use policies.
 - c. anonymous surfing.
 - d. preventing client computers from accepting cookies.

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7. What is the primary purpose of a Distributed Denial-of-Service (DDoS) attack?
 - a. To steal sensitive data from a company's servers
 - b. To gain unauthorized remote access to a computer system
 - c. To overwhelm a system with traffic, making it unavailable to users
 - d. To install ransomware on a victim's device

8. What is the primary function of encryption in protecting privacy within information systems?
 - a. To improve system performance and speed
 - b. To transform data into a secure format that can only be accessed with a decryption key
 - c. To automatically back up sensitive information
 - d. To create stronger user passwords

9. Which privacy concern arises when companies track users' online behaviour without their consent?
 - a. Identity theft
 - b. Profiling and targeted advertising
 - c. Cloud computing vulnerabilities
 - d. Open-source software usage

10. Under which law or regulation are companies required to inform users about the collection and use of their personal information?
 - a. The Digital Millennium Copyright Act (DMCA)
 - b. The General Data Protection Regulation (GDPR)
 - c. The Computer Fraud and Abuse Act (CFAA)
 - d. The Fair Use Doctrine

11. Which of the following is the primary purpose of intellectual property (IP) laws in information systems?
 - a. To ensure free access to all digital content
 - b. To protect the creators' rights to their innovations, software, and digital content
 - c. To regulate internet traffic and bandwidth usage
 - d. To prevent users from accessing open-source software

12. Which of the following scenarios would most likely be considered a violation of intellectual property law in an information system?
 - a. Using open-source software for a commercial project
 - b. Sharing a licensed software installation file with unauthorized users
 - c. Creating a software program with a similar user interface to a competitor's product
 - d. Selling hardware components without manufacturer branding

13. What distinguishes a patent from a copyright in the context of information systems?
 - a. A patent protects creative works like software code, while a copyright protects innovative inventions.
 - b. A patent grants exclusive rights to an invention's functionality, while a copyright protects the expression of ideas, such as software code.
 - c. Copyrights last for 50 years, while patents last for the lifetime of the creator.
 - d. Patents apply only to physical products, while copyrights apply to digital content.

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14. Which of the following best describes freedom of expression in the context of information systems?
 - a. The right to access and modify any information available on the internet
 - b. The right to communicate ideas and opinions online without censorship, within legal and ethical boundaries
 - c. The ability to post anonymous content without any accountability
 - d. The freedom to bypass security measures to obtain information
15. What ethical challenge often arises from protecting freedom of expression in online platforms?
 - a. Ensuring all online content is monetized for platform sustainability
 - b. Creating algorithms that automatically promote viral content
 - c. Encouraging users to share only government-approved information
 - d. Balancing the right to free speech with the need to prevent harmful content like hate speech and misinformation
16. What is a primary ethical concern associated with social networking platforms in information systems?
 - a. The collection and misuse of users' personal data for targeted advertising
 - b. The speed at which information spreads online
 - c. The availability of open-source tools for social media development
 - d. The cost of maintaining social media servers
17. Which of the following best describes the concept of a social media algorithm?
 - a. A set of rules that ensure users' privacy on social networking platforms
 - b. A program designed to automatically verify user identities on social networks
 - c. A system that prioritizes and personalizes content based on user behaviour and preferences
 - d. A tool used to detect and remove fake social media accounts
18. Which of the following best reflects an IT organization's ethical responsibility regarding user data?
 - a. Collect as much user data as possible to improve marketing strategies
 - b. Use encryption only for sensitive financial information
 - c. Share anonymized user data with third parties without informing users
 - d. Ensure that user data is collected, stored, and shared transparently and with consent
19. What ethical principle should guide IT organizations in designing systems that affect people's lives and livelihoods?
 - a. Profit maximization above all else
 - b. Minimizing production costs, even if it sacrifices security
 - c. Accountability, ensuring the organization takes responsibility for the system's social and environmental impact
 - d. Creating proprietary systems that restrict user access to their own data
20. An IT organization discovers a critical software vulnerability that could impact millions of users. What is the most ethically appropriate course of action?
 - a. Fix the vulnerability silently to avoid negative publicity
 - b. Delay the fix until a profitable upgrade can be released
 - c. Publicly disclose the vulnerability without offering a solution
 - d. Notify stakeholders, release a timely patch, and communicate transparently about the risk and resolution

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SECTION "B"

[6 Q. × 4 = 24 marks]

Attempt ANY SIX questions.

1. Why are organizations interested in fostering corporate social responsibility and good business ethics?
2. What key characteristics distinguish a professional from other kinds of workers, and is an IT worker considered a professional?
3. What is the difference between industrial spying and the gathering of competitive intelligence? Is the use of competitive intelligence ethical or unethical? Why?
4. Do you feel that information systems to fight terrorism and social vandalism should be developed and used even if they infringe on privacy rights or violate the Privacy Act and other such statutes?
5. What does the term intellectual property encompass, and why are organizations so concerned about protecting intellectual property?
6. What is reverse engineering, and what issues are associated with applying it to create a lookalike of a competitor's software program?
7. What important freedom of expression issues relate to the use of information technology?
8. What concerns do you might have with the Tag Suggestions feature? Do you agree with Facebook's philosophy of automatically enrolling users in new features without their knowledge or consent? Why or why not?

SECTION "C"

[2 Q. × 8 = 16 marks]

Attempt ANY TWO questions.

9. Who are the primary perpetrators of computer crime, and what are their objectives? Do you believe an organization should be able to escape criminal liability for the acts of its employees if it has acted as a responsible corporate citizen, making strong efforts to prevent and detect misconduct in the workplace? Why or why not?

P.T.O.

10. What are the core issues associated with Contingent Workforce and offshore outsourcing? What factors must a company consider in deciding whether to employ offshore outsourcing on a project? While filling an open position for a Nepal-based IT organization, do you think that preference should be shown for qualified candidates from Nepal over qualified candidates from foreign countries? Why or why not?

11. You have been asked by the manager of software development to lead a small group of software developers in an attempt to re-engineer the latest release of the software by your leading competitor. The goal of the group is to identify features that could be implemented into the next few releases of your firm's software. You are told that the group would relocate from the United States of America to Nepal, to "reduce the risk of the group being distracted by the daily pressures associated with developing fixes and enhancements with the current software release." What sort of legal and/or ethical questions might be raised by this reengineering effort? Given the vast differences between the legal and ethical practices between Nepal and the United States of America, would you consider taking this position? Why or why not? What would be some of your pre-notion and criteria for accepting this responsibility?