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# Daffodil International University

**Faculty of Science & Information Technology**
**Department of Computer Science and Engineering**
**Final Examination, Spring 2025**
**Course Code: CSE498, Course Title: Social and Professional Issues in Computing**
**Level: L-4, T-2 Batch:59**

**Time: 02:00 Hrs.** **Marks: 40**

**Answer ALL Questions**

***[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]***

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|---|---|---|---|---|
| **1.** | ***a)*** | A customer receives several unauthorized charges on her credit card after falling victim to a phishing scam. In light of this incident, **discuss** how identity theft and credit card fraud can occur in modern digital transactions. What measures can individuals and financial institutions implement to mitigate these risks? | **5** | **CO1** |
| | ***b)*** | An online group calling themselves "Digital Justice" breaches a government website and publishes confidential data as an act of protest. **Analyze** this case in terms of "harmless" hacking versus hacktivism. What ethical and legal considerations arise from such actions? | **5** | |
| **2.** | | A company sells a device (smartphone, tablet, or other small portable device) for which owners can download third-party apps from your app store. The company's published policy says that the company will delete an app from users' devices if and only if the company discovers that the app contains malicious software such as a virus that compromises the security of the devices or of sensitive user data on the devices. The company discovers that an app has an undocumented but easily initiated component that displays extremely offensive video showing men insulting and violently attacking people. The company immediately removes the app from its app store and alerts customers to delete the app from their devices. | | **CO2** |
| | a) | Should the company remotely delete the app from the devices of all who downloaded it? **Compare** on both sides. Which side do you think is stronger? Why? | **5** | |
| | b) | Does removing the app from users' devices violate ethical implications, or is it a responsible action to prevent harm? **Discuss** the both perspectives. | **5** | |
| **3.** | a) | **Analyze** the challenges and advantages of pursuing patent protection for software algorithms, considering factors such as the financial implications, the legal defense required to uphold patents, and the limitations imposed by territorial boundaries. | **5** | **CO2** |
| | a) | **What** are the ethical and legal considerations surrounding issues like music piracy, online plagiarism detection services, and the responsibilities of platforms facilitating copyright infringement? | **5** | |
| **4.** | ***a)*** | You are part of a team developing an autopilot system for commercial aircraft. During testing, a software bug causes the plane to nosedive unexpectedly. **How** would you approach the investigation, and what measures would you implement to prevent such failures from occurring in the real-world deployment? | **5** | **CO2** |
| | ***b)*** | You are a member of a community considering the implementation of a new computer-based voting system for local elections. Some residents are concerned about the reliability and security of such a system. How would you address these concerns and **evaluate** the potential risks and benefits of adopting the new technology? | **5** | |