



Undergraduate Programme
Department of Computer Science and Mathematics
Semester 2 Year 2018

FINAL EXAMINATION PAPER

ITC262 PROFESSIONAL PRACTICE IN IT

Important Instructions to Students:

1. Read the questions, instructions carefully and answer the questions.
2. You are allowed an **extra 10 minutes reading time** (during this time, you are not allowed to write with pen) and **180 minutes (3 Hours) to complete this paper**.
3. Silent, non-programmable calculators are allowed, but not supplied.
4. Write all your answers in the answer booklet provided. If you need extra sheets, please ask from the supervisor. Write your name, course code and student identification number in the answer booklet and in the attendance sheet.
5. **This Final Course Examination Paper is worth 100 marks contributes 50% of the total course assessments.**
6. This paper contains four (4) sections A, B, C and D. All questions are compulsory to answer.
7. Write all your answers legibly. The marker has the right to award zero for answers that are not legible.
8. This is a **Closed Book Examination**. The University views plagiarism, cheating and dishonest practice as serious offences and if found, offenders are penalized.

Examination Paper Content (Format):

<u>Section</u>	<u>Question</u>	<u>Content</u>	<u>Marks</u>	<u>Suggested Time</u>
A	1-20	Short Answer Questions	40	65 minutes
B	1-10	Critical Thinking	30	65 minutes
C	1-2	Case Studies	20	30 minutes
D	1-4	Essay	10	20 minutes
		TOTAL	100	180 Minutes

SECTION A: SHORT ANSWER QUESTIONS

[40 Marks]*All questions in this section are compulsory*

1. Describe a hypothetical situation in which the action you would take is not legal, but it is ethical.
Describe a hypothetical situation where the action you would take is legal, but not ethical.
[2 Marks]
2. 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?
[2 Marks]
3. How do you distinguish between misrepresentation and embellishment of one's professional accomplishments on a résumé? Provide an example of an embellishment that would not be considered misrepresentation.
[2 Marks]
4. Should all IT workers be either licensed or certified? Why or why not?
[2 Marks]
5. How would you distinguish between a hacktivist and a cyberterrorist? Should the use of hacktivists by a country against enemy organizations be considered an act of war? Why or why not? How about the use of cyberterrorists?
[2 Marks]
6. What is the difference between industrial spying and the gathering of competitive intelligence? Is the use of competitive intelligence ethical or unethical? Why?
[2 Marks]
7. What is a pen register? What is required in order for a law enforcement agency to gain approval for a pen register?
[2 Marks]
8. Are surveillance cameras worth the cost in terms of resources and loss of privacy, given the role that they play in deterring or solving crimes?
[2 Marks]
9. What is a SLAPP? Under what conditions might a corporation employ a SLAPP? What are some actions that could be taken to counteract a SLAPP?
[2 Marks]
10. What is a John Doe lawsuit? Do you think that a corporation should be allowed to use subpoena to identify a John Doe before proving that the person has done damage to the company? Why or why not? Under what conditions will the courts execute a John Doe lawsuit?
[2 Marks]
11. What is a cross-licensing agreement? How do large software companies use such agreements? Do you think their use is fair to small software development firms? Why or why not?
[2 Marks]

12. What problems can arise in using nondisclosure and noncompete agreements to protect intellectual property? [2 Marks]
13. Define and briefly discuss the difference between white box testing and black box testing. [2 Marks]
14. What is the difference between system reliability and system safety? Give an example of a system that operates reliably but not safely [2 Marks]
15. Define the term telework. What technologies are essential for effective telework? [2 Marks]
16. What is the digital divide? Where does it exist? Why is it important to bridge the digital divide? [2 Marks]
17. Identify two significant advantages that social network advertising has over other forms of advertising. [2 Marks]
18. Can role be playing illegal and violent fantasies in a virtual world affect individuals and society in the real world? What are the social and ethical implications of such role playing? Should limits be placed on what players can do in virtual worlds? [2 Marks]
19. What factors must a company consider in deciding whether to employ offshore outsourcing on a project? [2 Marks]
20. Why do companies that make use of a lot of contingent workers fear getting involved in a co-employment situation? What steps should they take to avoid this situation? [2 Marks]

SECTION B: CRITICAL THINKING**[30 Marks]***All questions in this section are compulsory*

1. You are currently being considered for a major promotion within your company to vice president of marketing. In your current position as manager of advertising, you supervise 15 managers and 10 hourly workers. As part of the annual salary review process, you have been given the flexibility to grant your employees an average 3 percent annual salary increase; however, you are strongly considering a lower amount. This would ensure that your department's expenses stay under budget and would send the message that you are able to control costs. How would you proceed?

[3 Marks]
2. You are in charge of awarding all computer hardware service contracts (valued at over \$2 million per year) for your employer. In recent emails with the company's current service contractor, you casually exchanged ideas about family vacations. You mentioned that your family is planning on vacationing in the Scottsdale, Arizona, area. You are surprised when the contractor emails you an offer to use his company's condominium at a plush Scottsdale resort, complete with golf and health club privileges. He assures you that the condo would normally be empty that time of year and that other customers frequently use the condo. The resort is one you are familiar with but have never used because the rental is well over \$5,000 per week. You would really like for your family to experience staying at a five-star resort but you worry about the potential consequences of accepting the offer. If your manager saw a copy of the emails exchanged with the contractor, could it appear that you were soliciting a bribe? Could this offer be considered a bribe? What would you do?

[3 Marks]
3. You are the CFO of a midsized manufacturing firm. You have heard nothing but positive comments about the new CIO you hired three months ago. As you watch her outline what needs to be done to improve the firm's computer security, you are impressed with her energy, enthusiasm, and presentation skills. However, your jaw drops when she states that the total cost of the computer security improvements will be \$300,000. This seems like a lot of money for security, given that your firm has had no major incident. Several other items in the budget will either have to be dropped or trimmed back to accommodate this project. In addition, the \$300,000 is above your spending authorization and will require approval by the CEO. This will force you to defend the expenditure, and you are not sure how to do this. You wonder if this much spending on security is really required. How can you sort out what really needs to be done without appearing to be micromanaging or discouraging the new CIO? How do you proceed?

[3 Marks]
4. Your auto insurance company has offered you a 15 percent discount (roughly \$200 per year) if you agree to let them install a sophisticated vehicle event data recorder (EDR) in your car. You have read over the terms of the agreement and discover that if you are involved in an accident, you must agree to let the data from the device be collected and analyzed by a third-party accident investigation firm. You must also agree to let findings from this analysis be used in a court of law. What questions would you want answered and what advice might you seek before deciding whether to accept this discount offer?

[3 Marks]
5. Your 15-year-old nephew exclaims "Oh wow!" and proceeds to tell you about a very revealing photo attachment he just received in a text message from his 14-year-old girlfriend of three weeks. He can't wait to forward the image to others in his school using the Snapchat application on his phone. What would you say to your nephew? Are further steps needed besides a discussion on sexting?

[3 Marks]

6. You have been asked by the manager of software development to lead a small group of software developers in an attempt to reengineer 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 to the island of Antigua, in the Caribbean Sea, 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? Would you consider taking this position?
- [3 Marks]
7. You are the project manager in charge of developing the latest release of your software firm's flagship product. The product release date is just two weeks away, and enthusiasm for the product is extremely high among your customers. Stock market analysts are forecasting sales of more than \$25 million per month. If so, earnings per share will increase by nearly 50 percent. There is just one problem: two key features promised to customers in this release have several bugs that would severely limit the software's usefulness. You estimate that at least six weeks are needed to find and fix the problems. In addition, even more time is required to find and fix 15 additional, less severe bugs just uncovered by the QA team. What would you recommend to management?
- [3 Marks]
8. It is the year 2028, and robots are being introduced to handle the screening of patients at physicians' offices in the United States. The robots look human and are able to speak and understand English and Spanish. The robots are capable of performing basic nursing tasks such as taking a patient's vital signs. Upon arriving at a physician's office, a patient would meet with the robot to determine the patient's current conditions and symptoms and to review pertinent medical history from the patient's EHR. The robot would then form a preliminary diagnosis and suggest a course of action, which could include additional tests, medication, referral to a specialist, or hospitalization. A human physician would then review the preliminary diagnosis and suggested course of action. If necessary, the physician would meet with the patient to confirm the robot's diagnosis and order any additional work or medications that might be necessary. The robotic physician assistant can be made available 24/7 and can even be stationed at convenient locations such as shopping malls, schools, and college campuses. The goal of using robotic physician
- [3 Marks]
9. You are surprised to receive Facebook and LinkedIn friend requests from one of your neighbours in the apartment building that you moved into last weekend. You know nothing about the individual and are really not interested in being friends. Your first reaction is to ignore the requests, but you are concerned that you will keep running into the person around your apartment complex and that the situation could become awkward. What would you do?
- [3 Marks]
10. Your firm has just added six H-1B workers to your 50-person department. You have been asked to help get one of the workers "on board." Your manager wants you to introduce him to other team members, provide him with some basic company background and information, and explain to him how work gets done within your organization. Your manager has also asked you to help your new co-worker become familiar with the community, including residential areas, shopping centres, restaurants, and recreational activities. Your goal would be to help the new worker be productive and comfortable with his new surroundings as soon as possible. How would you feel about taking on this responsibility? What would you do?
- [3 Marks]

SECTION C: CASE STUDIES**[20 Marks]***All questions in this section are compulsory*

1. Facebook, Freedom of Speech, Defamation, and Cyberbullying

In February 2009, Oceanside High School graduate Denise Finkel sued Facebook, four former classmates, and their parents for false and defamatory statements made against her. The classmates, part of a private Facebook group called “90 Cents Short of a Dollar,” had posted comments to a password-protected page alleging that Finkel used intravenous drugs, had AIDS, and had engaged in inappropriate sexual behaviour.

Many legal commentators found the case surprising. Why would an attorney sue Facebook, when the company is obviously protected by Section 230 of the Communications Decency Act (CDA)? The CDA protects Web site owners from liability for content posted by a third party. Thus, Facebook should be immune from defamation lawsuits that arise from user-posted content. However, Finkel claimed that Facebook’s Terms of Use agreement established Facebook’s proprietary rights to the site’s content. In support of this argument, she pointed to the following clause in the agreement: “All content on the site ... [is] the proprietary property of the Company, its users or licensors with all rights reserved.” As a result of this unique argument, the case attracted national attention because the consequences of the ruling could have serious implications for other social media sites. In September 2009, however, the Supreme Court of New York ruled that the Terms of Use did not disqualify Facebook from immunity under the CDA.

This ruling provoked commentary by legal professionals, but no one was very surprised. What was less predictable was whether or not the court would hold Finkel’s classmates liable. To what extent do students have the right to exercise their freedom of speech through social media outlets? What restrictions have been placed on this freedom?

In July 2010, the New York Supreme Court dismissed the case against Finkel’s former classmates. The court determined that teenage members of the “90 Cents Short of a Dollar” Facebook group had simply acted childishly and were not guilty of defamation. Finkel did not have any recourse against her former classmates via an antibullying statute because although the state of New York has a law prohibiting bullying, it only prohibits bullying on school property. The law does not apply to cyberbullying. Furthermore, the law merely requires that the schools take disciplinary action, and it does not provide for criminal sanctions.

In a landmark 1969 case, *Tinker v. Des Moines School District*, the U.S. Supreme Court established that public schools cannot curtail students’ freedom of speech unless this speech would cause a substantial disruption to school activities or violate the rights of other students. Hence, a federal judge overturned the suspension of a high school senior who created a fake MySpace profile of his principal; the profile said the principal took drugs and kept alcohol at his desk. However, in a similar case, a U.S. district court ruled against a Pennsylvania junior high student who had created a fake MySpace profile of her principal claiming that he was a sex addict and a paedophile. She had been suspended for 10 days, and her parents sued the school. Teachers at the school testified that the profile had caused a disruption in class because students were too busy talking about the profile to pay attention in class. The court determined that the talking had constituted a “substantial disruption.” Both of these decisions were upheld on appeal.

Many states have recently enacted bullying laws that restrict written and symbolic speech on social media sites. In 2005, a Florida honours student committed suicide after three years of teasing at school and online bullying. As a result, in 2008, the state enacted a tough law called the “Jeffrey Johnston Stand Up for All Students Act.” The law prohibits the teasing; social exclusion; threat; intimidation; stalking; sexual, religious, or racial harassment; or public humiliation of any public-school student or employee on or offline.

The law is limited in that it only applies to behaviour during school, on a school bus, during any school-related or school sponsored program or activity, or from computers that are part of a K-12 system.

In January 2011, two Florida teenagers, Taylor Wynn and McKenzie Barker, were arrested for allegedly setting up a false Facebook account for a classmate that included nude photos. The teenage girls are accused of doctoring photographs, placing the classmate's face on the bodies of naked men and women, and posting them to the site. Although the victim told the school resource officer that the teasing would eventually "go away," a parent of another student notified authorities. Investigators traced the IP addresses to Wynn and Barker and collected incriminating text messages and emails linking them to the false Facebook page. Wynn and Barker were charged with stalking a minor under the new Jeffrey Johnston Stand Up for All Students Act.

In another example of how serious online cyberbullying can get, 14-year-old Kameron Jacobsen, a freshman at Monroe-Woodbury High School in Orange County, New York, committed suicide after being taunted on Facebook for his presumed sexual orientation.

Although freedom of speech is a right guaranteed by the U.S. Constitution, it can be restricted where it violates the other rights of individuals—as established by state or federal laws. To date, thirty-one states have antibullying laws that include electronic forms of bullying.⁸⁶

Questions

1. Why is Facebook protected from liability for content posted by third parties? Do you think that Facebook and other social network providers should be protected from liability for what their members post? Why or why not?

[3 Marks]

2. How is a student's freedom of speech restricted on social media sites such as Facebook?

[3 Marks]

3. Should Taylor Wynn and McKenzie Barker have been prosecuted despite the victim's attitude that the teasing would pass? How should cyberbullying laws be implemented?

[4 Marks]

2. IBM Provides Supply Chain Leadership

In 2013, the U.S. Environmental Protection Agency (EPA) presented IBM with a Climate Leadership Award.⁵¹ IBM has served as an environmental steward “during periods when the environment was not always as popular a subject as it is today; during profound changes in the global economy, our industry, and our business model; and during periods of differing financial results,” notes Wayne S. IBM’s Vice President for Corporate Environmental Affairs and Product Safety.⁵² IBM is publicly committed to making its products environmentally friendly, energy efficient, reusable, recyclable, and safely disposable. As an IT giant, IBM significantly impacts environmental health by reducing its own environmental footprint.

The EPA recognized IBM because of its ambitious emissions reduction goals and because it has become a supply chain leader, requiring that companies up and down its supply chain establish environmental sustainability programs. At first, this may not seem impressive, as many of IBM’s suppliers are much smaller companies with smaller carbon footprints. However, IBM has over 27,000 suppliers, ranging from third-party data centres to rental car companies, and a recent survey found that 45 percent of these companies have not only established programs to reduce their greenhouse gas emissions (GHG) but have also set specific targets to do so. As a heavyweight in the corporate world, IBM is well positioned to make a difference through supply chain leadership.

IBM’s supply chain program was established the same year that IBM achieved a remarkable environmental success. It took over five years and extensive coordination with many suppliers, but in 2010, IBM became the first computer manufacturer to eliminate the use of perfluorooctane sulfonate and perfluorooctanoic acid compounds from its chip manufacturing processes. The two compounds are known to be toxic to both humans and animals.

IBM set aggressive goals for emissions reduction, and the company requires all its suppliers to establish management programs to implement environmentally responsible programs, and to measure and report their performance toward meeting environmental goals. Moreover, all of the company’s “first-tier” suppliers must ensure that their own supplies meet or exceed these goals. These programs must at the very least track carbon emissions and waste management.

IBM is not the only IT giant to receive the EPA’s Climate Leadership Award. Cisco Systems and SAP have both recently received the same award. Cisco uses its supply chain program to score its suppliers, and those scores impact which companies Cisco conducts business with. Cisco also conducts independent third-party audits of its suppliers to make sure they are accurately reporting on their progress. SAP has created technology for its supply chain environmental programs, which the company claims reduces carbon emissions by 2.5 million tons annually—saving approximately \$500 million in energy costs.

Both IBM and Cisco are members of the Carbon Disclosure Project (CDP). Funded by numerous institutions and governments around the world, CDP works with thousands of companies to reduce GHG emissions, create sustainable water use programs, reduce deforestation, and—most notably—create programs that cascade the environmental commitments of large companies down the supply chain.

Questions

1. Why does IBM’s supply chain program have such a large impact on environmental health?

[3 Marks]

2. How do companies like Cisco ensure that their suppliers are complying with their supply chain programs?

[3 Marks]

3. How might IBM influence members of its supply chain to follow its environmental program?

[4 Marks]

SECTION D: ESSAY

[10 Marks]

Answer only one question from the list

Topics List:

1. Current status of intellectual property protection in Fiji.
2. Impact of Facebook on Fiji's Community in the last three years.
3. Most common computer and internet crimes in Fiji this year.
4. The Impact of automated Value Added Tax (TAX) system on Fiji's Businesses.

Choose one topic from the list given above and write a 350-400 words essay. The essay should have the following components

- ✓ A good Title
- ✓ Introduction (~60 words)
- ✓ Three content paragraphs discussing a relevant ethical and/or legal issue. Use good examples. (~80-100 words each)
- ✓ Conclusion (~60 words)

THE END

