INTERNATIONAL UNIVERSITY OF EAST AFRICA
'Learning to Succeed'

FACULTY OF SCIENCE AND TECHNOLOGY

END OF SEMESTER EXAMINATIONS - AUGUST 2025

PROGRAMME: MIT
YEAR/SEM: YEAR 1/SEMESTER 2
COURSE CODE: MIT720
NAME: CONTEMPORARY ISSUES IN IT

DATE:
TIME:

INSTRUCTIONS TO CANDIDATES:

SECTION A

Attempt all questions

Question 1:

Pearl Safaris, a Ugandan tour operator, recently digitized all customer data, storing it on an internal server and a cloud CRM (customer relationship management) system. A small data breach exposed customer emails due to a misconfigured firewall, prompting management to reinforce IT professionalism and data security. The IT team includes a Network Administrator (John), a Junior IT Support Specialist (Sarah), and an external IT Consultant (David).

a. Define Professionalism in IT for Pearl Safaris' IT team, and explain how John, Sarah, and David can demonstrate it daily. (8 marks)

b. Discuss which core principles of IT professionalism were likely violated, leading to the data breach, and how adherence could have prevented it. (8 marks)

c. Pearl Safaris is considering IT certifications for John and Sarah in cybersecurity and cloud security; explain the benefits and challenges of these certifications. (10 marks)

d. Considering Uganda's digital transformation, discuss how Pearl Safaris' IT professionals can contribute to building trust in technology and promoting digital literacy within the community after the data breach. (4 Marks)

e. Give one example of original creation, innovation, or branding element for which the company could seek protection under each of the following intellectual property rights: (2 marks each)

(i) Copyright

(ii) Patent

(iii) Trademark

(f) Briefly explain how obtaining such intellectual property rights in (e) above, would benefit Pearl Safaris in the long run (4 marks)

Question 2:

As a software graduate IT officer at Ggabatelecoms, a Kampala, Uganda-based business specializing in software and technology systems development, you've encountered a challenging situation while working on a mobile application for an internship center for IT and computer science students. Your teammate has used stolen code and UI (User Interface) components from a well-known global app, a concern your manager dismissed. Additionally, a rival is using a similar name and logo, causing market confusion, and Ggabatelecoms lacks intellectual property protection.

Here's a summary of the questions you need to address:

a) Discuss the moral implications of using stolen code and UI, linking it to IT professional ethics. (10 marks)

b) What actions should you take as a Ugandan professional developer witnessing unethical behavior? (5 marks)

c) Differentiate between trademark, patent, and copyright, providing Ggabatelecoms-specific examples for each case. (12 marks)

d) Explain the dangers for a digital company not registering a trademark in Uganda and its impact on Ggabatelecoms. (6 marks)

SECTION B

Attempt a maximum of 3 questions.

Question 1:

Explain the following terms.
(a)Reverse Engineering (5 marks)
(b)Cybersquatting (5 marks)
(c)Competitive Intelligence (5 marks)
(d) Open Source Code
(5 marks)

Question 2:

Explain any five types of trade marks (4 marks each)

Question 3:

(a) Why should a business person register a trademark for a product or service? (10 marks)

(b) Explain the steps for registering for a trademark (10 marks)

Question 4:

(a) Explain any 3 differences between a Utility patent and a Design patent (10 marks)

(b) Why is it important to register patents (10 marks)

Question 5:

As an ICT policy advisor in Uganda, tasked with presenting a case to a government committee on the importance of intellectual property rights (IPR). Describe in detail three creations that IPR protects. Explain why these creations are important for national development and innovation, and defend why protecting them is essential. (20 marks)

Question 6:

(a) What Can Be Patented?. Explain four examples (8 marks)

(b) What can be copyrighted . (12 marks)

Question 7:

You are the founder of a tech start-up in Uganda that has developed an innovative mobile payment application called SmartPay, which relies on a unique algorithm for its competitive edge. As your business grows, you become concerned about the risk of losing this valuable trade secret. (a) What are the improper means by which inventors or companies like yours might lose trade secrets in Uganda? Describe these in detail (8 marks) (b) What strategies

can you implement to minimize the possibilities of losing trade secrets in Uganda? Explain in detail.(12 marks)

Question 8:

Imagine you are part of the academic committee at a prestigious university in Uganda. Recently, the administration has noticed a rise in cases of plagiarism among students, particularly in their research projects and assignments. Task: Propose five effective strategies to control plagiarism in this context. (20 marks)

Question 9:

a) Define business processes and explain how information technology improves them. Provide at least three ways IT enhances business processes. (10 Marks)

b) Information systems raise various ethical and social issues. Identify and briefly explain four ethical issues related to information systems discussed in the lecture. (10 Marks)

Question 10:

(a) Explain the key characteristics that distinguish a "profession" (12 marks)

(b) How do IT workers fit the legal definition of a professional? (8 marks)

Question 11:

(a) Discuss four specific ethical issues that can arise in the relationship between IT professionals and their employers (10 marks)

(b) Explain the difference between a bribe and a gift in the context of IT professional relationships with suppliers

Question 12:

(a) Identify and briefly describe three common ethical issues faced by IT users. (10 Marks)

(b) Explain how establishing an IT usage policy can support the ethical practices of IT users. List at least three components that such a policy should include. (10 Marks)