



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF APPLIED SCIENCE

DEPARTMENT OF COMPUTER SCIENCE

ETHICS AND PROFESSIONALISM

SCS 1215

March 2025

This examination paper consists of 3 pages

Time Allowed: 3 hours
Total Marks: 100
Examiner's Name: Miss Nolwazi Ncube
External Examiner: Dr Cross Gombiro

INSTRUCTIONS

1. Answer any four (4) questions
2. Each question carries 25 marks

MARK ALLOCATION

QUESTION	MARKS
1.	25
2.	25
3.	25
4.	25
5.	25
TOTAL FOR ANY FOUR QUESTION	100

QUESTION ONE

- a) Explain the concept of "professional ethics." [5]
- b) Why is it important for professionals to adhere to a code of ethics? [5]
- c) What is phishing? [5]
- d) Describe **three** types of phishing attacks and how individuals can protect themselves from them. [10]

QUESTION TWO

- a) Define the following:
 - i) Data privacy [2]
 - ii) Data security. [3]
- b) Explain why the above are essential in the digital age. [10]
- c) Discuss the importance of fair treatment, respect, and providing a safe and ethical work environment. [10]

QUESTION THREE

- a) What are the arguments for and against software patents? [5]
- b) You are developing a new mobile app. What intellectual property considerations should you take into account before launching the app? [10]
- c) Explain **five** ethical challenges posed by artificial intelligence (AI) and machine learning (ML)? Give specific examples. [10]

QUESTION FOUR

- a) What are the ethical responsibilities of a company that experiences a data breach? [5]
- b) A colleague at your company is engaging in what you believe to be unethical behaviour (for example, misrepresenting data, or using company resources for personal gain). How do

you address this situation, considering your responsibilities to your colleague, your company, and your ethical principles? [20]

QUESTION FIVE

a) How do professional codes of ethics (e.g., ACM, IEEE) address the issue of computer crime? Give specific examples. [5]

b) You are a software developer and you discover a security flaw in a program you are working on. Fixing the flaw will delay the project and cost the company money. Using one of the ethical decision-making frameworks, analyse this situation and explain what you would do. [20]

END OF QUESTION PAPER

