



# MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FOURTH YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)

BACHELOR OF SCIENCE (COMPUTER SCIENCE)

SCO402/SIT402: LEGAL AND ETHICAL ISSUES IN COMPUTING

DATE: 22/1/2021

TIME: 2:00 – 4:00 PM

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## INSTRUCTIONS

*This paper consists of FIVE questions*

*Answer **question one** and other **two** questions in this paper*

### QUESTION ONE (COMPULSORY) (30 MARKS)

- (a) Explain each of the following terms as used in computer ethics:
- (i) Moral good;
  - (ii) Norms;
  - (iii) Computer crime. (6 marks)
- (b) A student signed a contract with a telecommunication company to develop an end user application program.
- (i) Outline **three** benefits of this contract to the student. (3 marks)
  - (ii) Outline three circumstances under which the contract is not enforceable. (3 marks)
- (c) Peter, an Information Technologist would like to join a professional body in Kenya.
- (i) Name **two** such bodies; (2 marks)
  - (ii) Explain **three** benefits Peter would gain by joining this body. (6 marks)
- (d) ABC bank developed an Information Communication Policy for all its stakeholders. Outline **four** actions the bank should take to ensure stakeholders adhere to the policy. (4 marks)
- (e) Discuss **three** crimes spelled out in the Computer Misuse and CyberCrimes Act, 2018. (6 marks)

### QUESTION TWO (20 MARKS)

- (a) (i) Outline **three** elements of a tort. (3 marks).
- (ii) Describe six components of a software development contract. (6 marks)

- (b) Computer Security Act of 1987 empowered the National Bureau of Standards to carry out some tasks aimed at protecting federal computers. Explain **three** such tasks. (3 marks)
- (c) Discuss the information lifecycle citing an ethical issue that may arise at each of the stages. (8 marks)

### QUESTION THREE (20 MARKS)

- (a)
  - (i) Outline **two** functions of ethical thinking in Information Communication Technology. (2 marks)
  - (ii) Distinguish between *moment of truth* and *moment of recognition* as used in computer ethics. (4 marks)
- (b) Discuss **four** types of ethical dilemmas that a computer scientist may encounter. (8 marks)
- (c) Staff in a Kenyan University have been tampering with records stored in the Student Management Information System.
  - (i) Outline **three** controls that could be used to deter this behaviour. (3 marks)
  - (ii) Explain **three** conditions necessary for effective deterrence. (3 marks)

### QUESTION FOUR (20 MARKS)

- (a) Outline **two** ways that a moral agent could act when confronted with an ethical issue. (2 marks)
- (b) Discuss **four** considerations used when solving an ethical issue. (4 marks)
- (c) “A social contract for the information age must deal with several key social tensions peculiar to the use of information”. Explain **three** of these tensions. (6 marks)
- (d) Zawadi, a newly employed system administrator is familiarizing herself with the company’s Information Communication Technology policy. Explain **four** types of ethical issues that she could identify in the policy. (8 marks)

### QUESTION FIVE (20 MARKS)

- (a) Distinguish between *demand pull* and *supply push* hypotheses as used in ethical issues. (4 marks)
- (b) Ethical thinking has both supporters and dissenters. Compare **three** arguments advanced by each of these groups. (6 marks)
- (c) A manager at a local bank has realized that a system administrator in the bank has transferred huge amount of money from the bank’s suspense account to his account. Discuss **five** approaches the manager could use in making the moral decision. (10 marks)