



MACHAKOS UNIVERSITY

University Examinations for 2016/2017

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF SCIENCE
IN COMPUTER SCIENCE

SCO 402: LEGAL AND ETHICAL ISSUES IN COMPUTING

DATE: 25/7/2017

TIME: 8.30-10.30 AM

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: -
- i) Ethics;
 - ii) Plagiarism;
 - iii) Copy right. (6 marks)
- b) John, a Web developer entered into a contract with Cybernets company to redesign its website within six months at a cost Kenya Shillings Two Hundred and Fifty Thousand.
- i) State John's obligations to the company. (2 marks)
 - ii) Outline **three** benefits that John could get from the contract. (3 marks)
- c) The system administrator of a certain company routinely monitors staff activities over the network.
- i) State whether this is ethical or not. Justify your answer. (2 marks)
 - ii) Outline the obligations the company has to its staff. (1 mark)
- d) i) Explain the term professional body. (2 marks)
- ii) Outline **three** benefits one would accrue by joining a professional body. (3 marks)

- e) You are a computer programmer working for a small business that provides specialized financial services to small businesses. XYZ company has approached you for advice on a software solution they could use as part of their business reengineering process. You know of a software which XYZ company could use without modification only that it is expensive. Your supervisor says, “That’s no problem. We have that software. Why don’t you just install it on XYZ’s computers?”

You diplomatically point out that this would violate the licensing agreement your company has with the software developers. “Do it anyway”, your supervisor says. “Nobody will find out and XYZ is an important client. We need to do all we can to keep them happy.

- i) As a moral agent discuss **four** options of dealing with the issue. (4 marks)
- ii) Which is the best solution to the dilemma. (1 mark)
- f) Discuss the elements of a tort. (6 marks)

QUESTION TWO (20 MARKS)

- a) i) Outline **three** circumstances under which a contract may not be enforceable. (3 marks)
- ii) Discuss the nature of a software development contract. (6 marks)
- b) Discuss **three** principles of information as provided for by the Data Protection Act 1998 (UK). (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) Explain **two** reasons that could make an insider breach confidentiality of a company’s data. (4 marks)
- ii) Distinguish between *phishing* and *hacking* as used in computer ethics. (4 marks)
- b) Discuss the circumstances under which a contract shall be treated as discharged. (6 marks)

- c) Read the following case study and then answer the questions that follow: -

In June 1988, executives at Lotus Development Corporation and at Equifax began discussions about the possibility of developing a desktop product for small businesses intending to use direct marketing to target new customers. That same year, Equifax, one of the three largest credit bureaus in the US, began mailing lists compiled from its consumer-credit-reporting database, public record information, and licensed data acquired from other direct marketers. This Equifax Consumer Marketing Database would provide the data for the new product, and Lotus would develop the software. The two firms refined the technical and conceptual aspects of the project during 1989 and 1990, and on April 10, 1990, the companies jointly announced Lotus MarketPlace: Households. The product, which would be marketed by Lotus, consisted of a CD-ROM database containing actual and “inferred” data, such as name and address, age, gender, marital status, household income, “lifestyle” and “purchasing propensity,” on about 120 million individuals residing approximately 80 million households. Although the original source from the name and address was an individual’s credit report, the remaining information contained on the CD-ROM was either inferred or estimated.

Almost immediately, Lotus MarketPlace stirred controversy. Articles decrying the product’s potential threat to personal privacy appeared in the local and national press. Testimony against the product was given in two hearings held before the US House of Representatives. Moreover, in an unprecedented series of events, hundreds of members of public conferencing networks formed an electronic grassroots campaign to protest release of the product. The Lotus CEO’s electronic mail address was broadcast across the internet with a call for those who shared concern about the ethics of the product to express it to him directly.

On January 23, 1991, Lotus MarketPlace: Households was withdrawn before ever reaching the market. A spokesman said that this action was taken due to “the substantial, unexpected additional costs required to fully address consumer privacy issues”.

- i) Identify the Moments of Truth in this case. (2 marks)
- ii) Identify the Moments of Heightened Activity in this case. (2 marks)
- iii) Identify the Moments of Resolution in this case. (2 marks)

QUESTION FOUR (20 MARKS)

- a) Explain the term *moment of recognition* as used in computer ethics. (2 marks)
- b) Discuss the steps involved in solving an ethical issue in computing. (4 marks)
- c)
 - i) Explain the term *Intellectual Property Rights*. (2 marks)
 - ii) Outline **two** laws that protect Intellectual Property Rights in Kenya. (2 marks)
- d) Discuss **five** essentials of a simple contract. (10 marks)

QUESTION FIVE (20 MARKS)

- a) Explain the term *risk* as used in software projects. (2 marks)
- b)
 - i) A newly chartered University would like to upgrade its student management information system to allow students to update their biodata. Identify **two** risks that could be associated with the new system. (2 marks)
 - ii) Explain **three** measures that could be put in place to mitigate against risks in a software development project. (6 marks)
- c) Discuss **five** approaches that may be used when making a moral decision. (10 marks)