



*(Knowledge for Development)*

**KIBABII UNIVERSITY**  
**(KIBU)**

**UNIVERSITY EXAMINATIONS**  
**2021/2022 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS**  
**YEAR FOUR SEMESTER TWO EXAMINATIONS**

**FOR THE DEGREE OF BACHELORS OF SCIENCE**  
**(INFORMATION TECHNOLOGY)**

**COURSE CODE: BIT 421**

**COURSE TITLE: PROFESSIONAL, ETHICAL AND LEGAL  
ISSUES IN COMPUTING**

**DATE: 01/09/2022**

**TIME: 9.00 A.M- 11.00 A.M**

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**INSTRUCTIONS TO CANDIDATES**  
**ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (COMPULSORY)[30 MARKS]**

- a. You are on attachment at a local County ICT office. The office has unlimited access to the internet all the time. Since you are not in employment with a definite job to perform and target to meet, with relevant examples demonstrate the challenges you are likely to meet that relate to computer ethics and morality. [4 Marks]
- b. i Differentiate between law and policy. [2 Marks]  
ii. Examine three conditions that are necessary for a policy to become enforceable [3 Marks]
- c. Wakasyaka and Michweya are neighbours in a remote rural setting. At one point they disagree over a flash disk having music files. With your understanding of law, give reasons why Tort laws would be the best approach to solve their disputes rather than using civil law. [3 Marks]
- d. Dan, a student at KIBU completes his studies in Bachelors of Information Technology and opens a computer repair shop around Tuuti trading centre (Bungoma). Diana, a second year student has a laptop which is defective. By virtue of knowing Dan, Diana takes her laptop to him and asks him to repair it and they agree that she will pay later. Dan opens the laptop but on completion it stops working completely, worse than it was before Diana brought it.  
i. Was there a contract between Diana and Dan? Give reasons. [3 Marks]  
ii. Can Diana ask for compensation from Dan? Justify your answer. [2 Marks]
- e. Describe how the internet has been a detrimental tool in the development and creation of intellectual property. [2 Marks]
- f. State reasons why a whistle blower is an important person in an organization. [3 Marks]
- g. What role can you as a Computer or IT graduate play in the development of progressive public policy on the responsible use of the internet? [2 Marks]
- h. Describe the copyright law and state TWO condition copyright must fulfil before registration. [2 Marks]
- i. You have established a new technological-based company that deal with production of both computer hardware and software. Explain the guidelines that you will apply to protect the following company objects:  
i. hardware [2 Marks]  
ii. Source code or software. [2 Marks]

**QUESTION TWO [20 MARKS]**

- a. What are the main steps followed when making an ethical choice? [4 Marks]
- b. Distinguish between consequence-based and rule-based as principles of moral judgment. [4 Marks]
- c. How has the concept of computer hacking changed from its use before the advent of the internet and today? [2 Marks]
- d. Discuss any TWO functions of computer codes of ethics to computer professions. [4 Marks]
- e. What is the distinction between copyright infringement and piracy as applied to copyright law? [2 Marks]

**QUESTION THREE [20 MARKS]**

- a. i. Discuss three characteristics of a professional. [3 Marks]  
ii. Based on the above, are Computer Science and IT graduates professionals? Give reasons for your answer. [4 Marks]  
iii. The future is driven by Technology. As a Technology graduate and keeping in mind the above statement, what are the virtuous fundamental principles that you are expected to exhibit at your place of work [5 Marks]



- b. Ethical issues are not sufficient enough to solve problems related to computing. This has led to IT Professionals to develop codes of ethics for their members. Briefly outline the roles of the codes of ethics to computing field. **[4 Marks]**
- c. What moral obligations that are earned when one becomes a member of a professional body such as the ACM, BCS or IEEE, and how would you justify these moral obligations? **[4 Marks]**

**QUESTION [20 MARKS]**

- a. Differentiate between code of ethics and ethical systems as used in the study of professional ethics. **[2 Marks]**
- b. Briefly explain the concepts of *privacy*, *secrecy* and *confidentiality* **[3 Marks]**
- c. Under what condition will one copyright or patent or apply a trade mark to his software products **[3 Marks]**
- d. Read the following news story:

Facebook used its apps to gather information about users and their friends, including some who had not signed up to the social network, reading their text messages, tracking their locations and accessing photos on their phones, a court case in California alleges.

The claims of what would amount to mass surveillance are part of a lawsuit brought against the company by the former startup Six4Three, listed in legal documents filed at the superior court in San Mateo as part of a court case that has been ongoing for more than two years.

- i. Basing your argument on Ethical egoism, what is your view on the above as a professional in Information Technology? **[4 Marks]**
- ii. Under which law Six4Three Company bring up the above case? Give reasons **[4 Marks]**
- iii. If you were to be the judge in this case, with reasons what would be your verdict? **[4 Marks]**

**QUESTION FIVE [20 MARKS]**

- a. Differentiate between Meta-ethics and normative ethics. **[2 Marks]**
- b. What's the difference between open and corporate whistle blowing? Is it legal to whistle blow in the UK? **[3 Marks]**
- c. Explain the concept of ethical hacking. Is hacking a skill or a profession? Discuss. **[3 Marks]**
- d. Fourth year computing students were invited in a profession discussion seminar. Many students made their submissions on the article "*The Case of the Killer Robot*" one of the popular case study document that involve entirely fictitious persons and institutions. Silicon Valley was chosen as the location for the accident because Silicon Valley is an icon of high technology. Below is the Cast of Characters as outlined in the scenario.

- *Alex Allendale, Attorney, hired to defend Randy Samuels.*
- *Jan Anderson, former programmer and analyst at Silicon Techtronics. She opposed the use of the waterfall model on the robot project and was fired for her honesty.*
- *Turina Babbage, president of the Association for Computing Machinery (ACM). She announces an investigation by the ACM into violations of the ACM Code of Ethics by employees at Silicon Techtronics.*
- *Robert Franklin, reporter for the Silicon-Valley Sentinel Observer. He interviewed Professor Harry Yoder in order to see how an ethicist would view the developments in the killer robot case. The interview was published in the Sentinel-Observer's Sunday magazine.*



- *Horace Gritty, Professor of Computer Science and Related Concerns at Silicon Valley University. He sees poor interface design as a primary cause of the killer robot tragedy.*
- *Sandra Henderson, graduate student at Silicon Valley University. She assisted in the investigation into quality assurance procedures at Silicon Valley University.*
- *Ray Johnson, Robotics Division Chief at Silicon Techtronics. The Robotics Division needed a successful robot.*
- *Martha, anonymous newspaper source. She is the insider at Silicon Techtronics who gave the Silicon Valley Sentinel- Observer information about the group dynamics on the Robbie CX30 robot project.*
- *Bart Matthews, robot operator. A faulty computer program caused a Robbie CX30 robot to strike him dead.*
- *Roberta Matthews, widow of Bart Matthews.*
- *Jane McMurdock, Prosecuting Attorney for the City of Silicon Valley. She brought the manslaughter charges against Randy Samuels.*
- *Mabel Muckraker, reporter for the Silicon Valley Sentinel- Observer. She was put on the killer robot story because of her reputation as an effective investigative reporter.*
- *Bill Park, Professor of Physics at Silicon Valley University. He confirmed that Randy Samuels misinterpreted the robot dynamics equations.*
- *Randy Samuels, programmer. He wrote the program code that caused the Robbie CX30 robot to oscillate wildly, killing the robot operator, Bart Matthews.*
- *Sam Reynolds, CX30 Project Manager. Ray Johnson was his immediate boss. His background was in data processing, but he was put in charge of the Robbie CX30 project, much to Ray Johnson's chagrin. He was committed to the waterfall model of software development.*
- *Robbie CX30, the robot. Robbie never had an unkind thought about anyone, yet he turned into a savage killer.*
- *Wesley Silber, Professor of Software Engineering at Silicon Valley University. He conducted a review of software quality assurance procedures at Silicon Techtronics.*
- *Sharon Skinner, Professor of Software Psychology at Silicon Valley University. She saw Randy Samuels as a task-oriented person who was overly sensitive about criticism.*
- *Valerie Thomas, Attorney, hired by Sam Reynolds.*
- *Michael Waterson, President and CEO of Silicon Techtronics. Placed Sam Reynolds in charge of Robbie CX30 project as a cost-saving measure. He contributed generously to Jane McMurdock's re-election campaign. He hired Dr. Silber to conduct an investigation into software quality assurance at Silicon Techtronics.*
- *Max Worthington, Chief Security Officer for Silicon Techtronics. He monitored electronic mail communications among the employees and thus exposed Cindy Yardley.*
- *Ruth Witherspoon, programmer-analyst and spokesperson for the "Justice for Randy Samuels" committee. She defends Randy Samuels on the grounds that Silicon Techtronics was legally obligated to deliver a safe robot.*
- *Cindy Yardley, Silicon Techtronics employee and software tester. She admitted to faking software tests in order to save the jobs of her co-workers.*
- *Harry Yoder, Samuel Southerland Professor of Computer Technology and Ethics. He examines the tension between individual and corporate responsibilities in an interview published by the Sentinel-Observer's Sunday magazine. All of the persons and institutions named in Silicon Valley are purely fictitious.*

A student X from Kibabii University was reward by the panellists as the best student who gave unquestionable arguments on the case based on legal, ethical and professional aspects or dimensions as portrait in the scenario.

- i. Outline the ethical issues as raised in student X submissions **[4 Marks]**
- ii. Outline the legal issues as raised in student X submissions **[4 Marks]**
- iii. Outline the professional issues as raised in student X submissions **[4 Marks]**