



(Knowledge for Development)

KIBABII UNIVERSITY
(KIBU)

UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR

SPECIAL/SUPPLEMENTARY 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: 25/11/2022

TIME: 2.00 P.M. – 4.00 P.M.

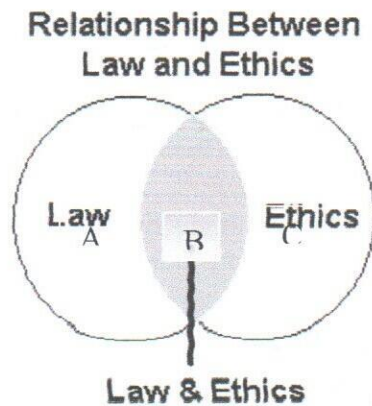
INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS

QUESTION ONE (COMPULSORY)

[30 MARKS]

- a. Outline the differences between an occupation and a profession **[4 marks]**
- b. Giving an appropriate reason classify the following ethical thoughts either as Deontologicalism or Consequentialism ethical principles:
 - i. A software engineer chooses to compromise a critical design feature to save on cost and please the client. **[2 marks]**
 - ii. Lecturer X believes in telling the truth regardless of the repercussion. **[2 marks]**
- c.
 - i) What is hacker ethics? Explain the situation that led to formulation of hacker ethics in 1950's **[3 marks]**
 - ii) Outline Any THREE tenets of the hacker ethics of 1950's to 1960's **[3 marks]**
- d. Justify the following arguments
 - i) Philosophy of intellectual property contradicts the philosophy of free culture in software development. **[2 marks]**
 - ii) Ethical values and legal principles are usually closely related, but ethical obligations typically exceed legal duties. **[2 marks]**
- e. Explain the meaning of strict liability and explain why strict liability does not apply to customized software but it applies to Mass- produced software. **[4 marks]**
- f. The following diagram depicts the relationship between law and ethics



- i. Giving appropriate examples explain the relationship as depicted by the diagram in each of the regions “A”, “B” and “C” **[6 marks]**
- ii. Explain the relationship between Law and policy **[2 marks]**

QUESTION TWO**[20 MARKS]**

- a. Identify the Any TWO schemes for grounding the evaluative rules in a Moral System [2 marks]
- b. Distinguish between copyright and copyleft material and explain the meaning of "fair use" with regard to copyright law [3 marks]
- c. Explain any THREE laws that fulfil intellectual property rights. [3 marks]
- d. Consider the following scenarios
- i. With Reference to Oracle vs Google case on use of Java programming language in developing android software or application explain why some computer professionals argue that Patenting software stifle innovation? [4 marks]
 - ii. Assume you are the lawyer representing Google in the case. Provide an argument on fair use in defense of your client. [2 marks]
- e. Explain the meaning of end-user license agreement as applied in proprietary software [2 marks]
- f. If we are to make any sense of the notion of right and wrong it can only be on the basis of agreed principles i.e. principles upon which ethical judgements can be made and ethical choices justified. Philosophers have studied ethics for centuries and have suggested a number of such principles. Two that have received a lot of attention are the *golden rule* and the *utility principle*.
- i. State the golden rule and the Utility principle [2 marks]
 - ii. How is the categorical imperative linked to the golden rule [2 marks]

QUESTION THREE**[20 MARKS]**

- a. Explain briefly the following concepts as used in cybercrimes.
- i. Cyber stalking [2 marks]
 - ii. Sniffing [2 marks]
 - iii. Cyber terrorism [2 marks]
- b. Read the following case and answer the questions that follow

JOHNSON, J. -- This case presents the issue of whether a limitation on consequential damages enclosed in a 'shrinkwrap license' accompanying computer software is enforceable against the purchaser of the licensed software. Petitioner M.A. Mortenson Company, Inc. (Mortenson), a general construction contractor, purchased licensed computer software from Timberline Software

Corporation (Timberline) through Softworks Data Systems, Inc. (Softworks), Timberline's local authorized dealer. After Mortenson used the program to prepare a construction bid and discovered the bid was \$1.95 million less than it should have been, Mortenson sued Timberline for breach of warranties alleging the software was defective. The trial court granted Timberline's motion for summary judgment. The Court of Appeals affirmed the order of summary judgment, holding

- (1) The purchase order between the parties was not an integrated contract;
- (2) The licensing agreement set forth in the software packaging and instruction manuals was part of the contract between Mortenson and Timberline; and
- (3) The provision limiting Mortenson's damages to recovery of the purchase price was not unconscionable.

M.A. Mortenson Co. v. Timberline Software Corp., 93 Wn. App. 819, 826-37, 970 P.2d 803 (1999). We granted Mortenson's petition for review and affirm the Court of Appeals.

- i. What is shrink wrap license and how does it differ from click-wrap license. [2 marks]
 - ii. What is an integrated contract? [2 marks]
 - iii. What is unconscionable conduct in business? [2 marks]
 - iv. Identify and explain any TWO principles of the software engineering code of ethics violated by Timberline Software Company in this case. [4 marks]
- c. Diana is a student who needs a copy of a particular textbook to help her with her coursework. The college library has a single copy of the book, which is already on loan, and will not be available again until after the coursework is due to be submitted. The book is available in the local bookstore for 3800 but her friend tells her of a file sharing site on the internet where she can download a PDF version of the book for free. Diana knows that downloading the PDF version is in violation of the author's copyright – on the other hand, she has already overspent this month and cannot really afford to spend another 3800.
- i. Using a consequentialist reasoning based on Act utilitarianism of the utility *principle* deduce what Diana should do [2 marks]
 - ii. Using a *deontologist* reasoning based on the *golden rule* deduce what Diana should do [2 marks]

QUESTION FOUR

[20 MARKS]

- a. Differentiate between Virtue ethics and Deontological ethics and explain the statement: “*Ethical Principles Are Not Universal*” [4 marks]
- b. Give the basic reasons why it is (or why it is not) reasonable for members of a professional body to report back to the professional body any significant violations of professional conduct on the part of another member. [4 marks]

apparently was truly mutually acceptable, as there is no indication that either the university or the dean pursued a modification to it.

Reporting of the incident by the news media: *Sometime between November of 1998 and May of 1999, a reporter discovered the story behind the dean's resignation. News articles do not say how the reporter became aware of the story. At any rate, six months after Harvard's internal resolution of the incident, a reporter decided it was newsworthy and revealed the dean's use of pornography to the public (Bandler 1999).*

- i. Explain how the Dean's rights and responsibilities are violated in the scenario. [2 marks]
- ii. Explain ethical issues as portrayed in the scenario. [4 marks]
- iii. Explain legal issues as portrayed in the scenario. [4 marks]
- iv. Explain professional issues portrayed the scenario. [4 marks]

- c. Explain any THREE functions of professional organizations and say why these functions are managed by the professional organization (rather than some other organization such as the government or universities). [6 marks]
- d. Discuss any THREE professional bodies that guide IT professionals. In each case outline their core mandate and professional obligation expected of its members. [6 marks]

QUESTION FIVE

[20 MARKS]

- a. Differentiate between trade mark and trade secrets. [2 marks]
- b. Explain the guidelines that can be used to protect the following computing objects:
- i. Protecting hard drive [2 marks]
 - ii. Protecting program source code [2 marks]

Read the following scenario on pornography on dean's desktop and answer the question that follows.

What the dean did: As a perk of being dean, the dean lived in a Harvard-owned home. His home office contained a Harvard-owned PC. Over a period of time the dean downloaded "thousands" of pornographic images from the internet to the PC in his home office (Helderman 1999). Reports characterize the pornography as "explicit" but "not involving child pornography or other illegal activity" (Bandler 1999). When the dean's PC ran short of disk space, the dean requested that technical support staff from the divinity school install a larger-capacity disk drive and transfer the contents of the old drive to the new drive.

The technician's discovery of the pornography: The disk upgrade was done in three steps: transfer of the old disk's files to a central computer, installation of a new disk, and transfer of the files back from the central computer (Bandler 1999). At some point in this process, the technician discovered the pornography. There is disagreement as to exactly how this happened. One report is that the dean left an image on the display that was seen by the technician when he/she arrived at the office to do the work (Helderman 1999). The dean's lawyer denies this account (Bandler 1999b). Another report has the technician noticing suggestive file names during the transfer (Bandler 1999b), and presumably opening a file out of curiosity or to verify the contents. Accounts state that the technician did not immediately report the pornography, but only reluctantly explained when a supervisor questioned why the disk upgrade took so much time (Bandler 1999).

Handling of the incident by Harvard administration: The report of the pornography made its way to the office of Harvard President Neil Rudenstine, as would be expected given that a dean was involved. The president and dean met, and "mutually agreed" that he would step down as dean (Bandler 1999). Publicly, the resignation was characterized as "because of medical problems" (Bandler 1999a), "for personal and professional" reasons (Helderman 1999) and "to spend time with my family" (Gegax 1999), with no mention of the pornography on the PC. It was announced that the dean would take a one-year sabbatical and then return as a regular tenured full professor (Helderman 1999). Because some news accounts refer to the dean being "fired" it is useful to clarify the employment status issue. This was in November of 1998. This resolution