

ZIMBABWE EZEKIEL GUTI UNIVERSITY



FACULTY OF SCIENCE, TECHNOLOGY, AGRICULTURE & FOOD SYSTEMS DEVELOPMENT

Department of Information Systems

MODULE CODE : BIS114
MODULE TITLE : ETHICS AND PROFESSIONALISM
SPECIAL REQUIREMENTS : None
DURATION : 3hrs
LEVEL : 1.1
DATE 30 JUL 2025 : 2025

Instructions

- (i) Mark allocation for each question is shown in square brackets.
- (ii) Number your answers accordingly.
- (iii) The total marks for the examination is 100.
- (iv) The Examination consists of Section A and Section B
- (v) Answer Section A and any **three** Questions from Section B

Section A – Theory Questions

[25 marks]

Read the following case study

CASE STUDY: PLANE CRASH

A plane makes an emergency crash landing on a deserted tropical island. Two dozen survivors must fend for themselves until help arrives. All of them are from large cities, and none of them has camping experience. The survivors find it impossible to gather enough food, and everyone begins losing weight. One person spends a lot of time by himself and figures out how to catch fish. He brings fish back to camp. Others ask him to teach them how to catch fish. He refuses, but offers to share the fish he has caught with the other passengers as long as they take care of the other camp chores, such as hauling fresh water, gathering firewood, and cooking.

Debate the morality of the bargain proposed by the fisherman.

- a) Explain why the fisherman's position is morally wrong or morally acceptable. [5]
- b) Use the five different ethics theories (KANTIAN ANALYSIS, ACT UTILITARIAN ANALYSIS, RULE UTILITARIAN ANALYSIS, SOCIAL CONTRACT THEORY ANALYSIS, and VIRTUE ETHICS ANALYSIS) to analyse the case and come up with your own conclusion. [20]

QUESTION TWO

- a) What is the difference between a circuit-switched network and a packet-switched network? [4]
- b) Why does the Internet have a decentralized structure? [2]
- c) Name four popular Web browsers in use today. [4]
- d) What is a search engine? [1]
- e) What is information technology? [2]
- f) Define hypertext. [2]
- g) Some say that no technology is inherently good or evil; rather, any technology can be used for either good or evil purposes. Explain this view giving clear examples. [10]

QUESTION THREE

- a) What is the problem of moral luck? [1]

- b) Why do businesses and governments often use utilitarian thinking to determine the proper course of action? [2]
- c) Describe similarities and differences between
- i. Act utilitarianism and rule utilitarianism. [4]
 - ii. Kantianism and social contract theory. [4]
 - iii. Cultural relativism and virtue ethics. [4]
- d) If you had to choose only one of the ethical theories and use it for all of your personal ethical decision making, which theory would you choose? Explain your choice and response to the arguments that may be raised against the theory you have chosen? [10]

QUESTION FOUR

- a) Define the following terms
- i. Phishing
 - ii. Cyberbullying
 - iii. Spam
 - iv. Blog
 - v. Sexting [10]
- b) i. Define censorship in your own words. [2]
- ii. What are the two benefits and one harm of Internet censorship? [3]

A school district forbids students from using their cell phones on school buses, but many students ignore this rule. A frustrated bus driver installs a cell phone jammer on his bus. When the jammer is turned on, cell phones within 40 feet stop working. (The use of jammers is against the law.) The bus driver says, "The kids think they are sneaky by hiding low in their seats and using their phones. Now the kids can't figure out why their phones don't work, but can't ask because they will get in trouble! It's fun to watch them try to get a signal"

Discuss the morality of the bus driver's use of the jammer. [10]

QUESTION FIVE

- a) Why are patents considered an unreliable way of protecting intellectual property rights in software? [2]

- b) Suppose company A wants to develop a program that duplicates the functionality of a program made by company B. Describe how company A may do this without violating the copyrights held by company B. [4]
- c) When describing a software license, what does the phrase "open source" mean? [2]
- d) How has Linux affected the market for proprietary software? [2]
- e) Suppose your band has recorded a song and posted it as an MP3 file on your Web site. How can you allow people to download your music for noncommercial purposes while retaining your copyright on the song? [5]
- f) A plane makes an emergency crash landing on a deserted tropical island. Two dozen survivors must fend for themselves until help arrives. All of them are from large cities, and none of them has camping experience. The survivors find it impossible to gather enough food, and everyone begins losing weight. One person spends a lot of time by himself and figures out how to catch fish. He brings fish back to camp. Others ask him to teach them how to catch fish. He refuses, but offers to share the fish he has caught with the other passengers as long as they take care of the other camp chores, such as hauling fresh water, gathering firewood, and cooking. Debate the morality of the bargain proposed by the fisherman. [10]

QUESTION SIX

- i. Differentiate between
- i. A data entry error and a data retrieval error. [4]
 - ii. An embedded system and a real-time system? [4]
- ii. What is a race condition in software? [2]
- ii. Why are race conditions difficult to debug? [4]

Over a period of seven years, about 500 residents of Tamuka, were overbilled for their water usage. Each resident paid on average about \$170 too much, making the total amount of the overbillings about \$100,000. The city council decided not to issue refunds, saying that about 300,000 bills would have had to be examined, some residents had left town, and the individual refunds were not that large. Discuss whether the city council make the right decision or not. Justify your answer. [10]

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