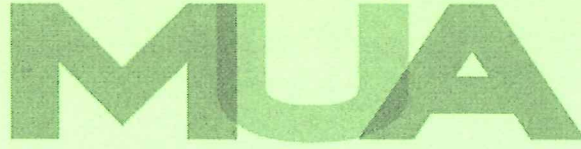


The
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UNDERGRADUATE UNIVERSITY EXAMINATIONS

SCHOOL OF MANAGEMENT AND LEADERSHIP

**DEGREE OF BACHELOR OF ARTS IN DEVELOPMENT STUDIES/
BACHELOR OF MANAGEMENT AND LEADERSHIP/ BACHELOR OF
COMMERCE/ BACHELOR OF EDUCATION ARTS**

UCU 103: INTRODUCTION TO LOGIC AND CRITICAL THINKING

DATE: 30TH JULY 2024

DURATION: 2 HOURS

MAXIMUM MARKS: 70

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. DO NOT write on this question paper.
3. This paper contains SIX (6) questions.
4. Question ONE is compulsory.
5. Answer any other THREE questions.
6. Question ONE carries 25 MARKS and the rest carry 15 MARKS each.
7. Write all your answers in the Examination answer booklet provided.

QUESTION ONE

Read the Case Study below carefully and, answer the questions that follow:

CASE I

A MUA counselor worked with five students; three of them (Tom, Cindy and April) were very problematic and the other two (Andy and Joel) were very cooperative. These students were distinguished by the following features. Tom came from a large family, had professional parents who were not wealthy, had training in phonics, read novels, lived close to a library, and watched educational TV. Andy came from a family that was not large, had wealthy professional parents, watched educational TV, did not live close to a library, and did not read novels.

Cindy did not read novels, lived close to a library, had training in phonics, had wealthy professional parents, came from a large family, and did not watch educational TV. April read novels, lived close to a library, watched educational TV, came from a small family, and had wealthy parents who were not professional. Joe read novels, did not live close to a library, had professional parents who were not wealthy, had training in phonics, watched educational TV, and came from a large family.

Required:

- a) Construct a table to assist in finding the root cause of trouble making
(10 marks)
- b) What can the counselor conclude caused the students to be trouble makers
(3 marks)
- c) Which of mills method did the counsellor use
(3 marks)
- d) What sense of causality is involved in the conclusion
(3 marks)

CASE II

Kopoile started a goat selling business sometimes back. On a Monday morning, he had 5 goats in the boma. During the day, he bought 15 goats. 4 goats gave birth to triplets and two goats died. If at the end of the day he had 8 goats,

Required:

- i. Calculate how many goats he sold (4 marks)
- ii. Suggest any two assumptions that should be made to assist in calculating profit in the above question (2 marks)

QUESTION TWO

- a) Using legal reasoning, critique the statement that "All noise makers in Nairobi city should be sentenced to death as they cause disturbances to the Nairobians" (10 marks)
- b) Using Venn diagram, Prove the validity of the statement that "No chicken are beef because it is false that some chicken are not beef" (5 marks)

QUESTION THREE

- a) Reduce the following categorical proposition into its standard forms, stating its letter name, quality, quantity and the terms distributed

..Some smoking girls that are found in learning institutions are not wives that are suitable for marriage ... (10 marks)
- b) From the following argument, identify the two fallacies committed, giving a brief explanation of each for your answer

Alice to the crowd; Apondo should be allowed to pass others in the queue. She has ten hungry children to feed and her boyfriend desperately needs an operation to save his life." No! Replied Mueni; if we allow Apondo now, Halima will cry; Harriet will faint,

Makali die and none of us will be left strong to withstand the hot sun. Surely nobody should be allowed to short cut the queue (5 marks)

QUESTION FOUR

A. Identify the kind of causality intended by the following statements. Is it a sufficient, necessary or both sufficient and necessary condition (10 marks)

- i. Pouring water on a wood fire will cause it to be extinguished
- ii. Eating contaminated food will cause one to become ill
- iii. Ability to breath causes a living thing to remain alive
- iv. Heating ice cubes above zero degrees Celsius under standard pressure causes it to turn to water
- v. Pulling the trigger of a gun causes it to fire

B. Using practical examples, assess the three factors that may lead a president to commit a fallacy (5 marks)

QUESTION FIVE

- a) Discuss the purpose of critical thinking skills to an MCA in Kenya (10 marks)
- b) Explain any five factors that influence the strength of an argument from analogy (5 marks)

QUESTION SIX

- a) Discuss the various steps that you would apply to differentiate an argument from non-arguments (10 marks)
- b) Explain the term cognition as used in logic (5 marks)