



# KENYATTA UNIVERSITY

## UNIVERSITY EXAMINATIONS 2011/2012

### INSTITUTION BASED PROGRAMME

### DECEMBER SESSION EXAMINATION FOR THE DEGREE OF MASTER OF EDUCATION

### EFN/M/521: LOGICS AND EDUCATION

**DATE:** Thursday 3<sup>rd</sup> May, 2012

**TIME:** 9.00 a.m. – 12.00 p.m.

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**INSTRUCTIONS:** Answer any *THREE* questions.

**Question 1:**

- (a) Distinguish between validity and truth as they are applied in the study of logic.
- (b) Critically examine the belief that the study of logic is fundamental to all academic discipline.

**Question 2:**

- (a) What do you understand by the term “fallacy”?
- (b) Name the fallacies committed and the rules broken by the following invalid syllogisms:
  - (i) EAA-1
  - (ii) OAA-4
  - (iii) OAO-2
  - (iv) IAO-3

**Question 3:**

- (a) Explain the following terms as they are applied from the traditional square of opposition:
  - (i) Contradictories
  - (ii) Contraries
  - (iii) Subcontraries
  - (iv) Subaltern and superaltern
- (b) Using immediate inference, explain the logical inferences of the following:
  - (i) Converse of the categorical propositions E and I
  - (ii) Obverse of the categorical propositions A, E, I and O.

- (iii) Contrapositive of the categorical propositions A and O.

**Question 4**

- (a) Express each of the following propositions as equations or inequalities representing each class by the first letter of the English term designating it, and symbolize them by means of Venn Diagrams:
- (i) Some teachers are actors
  - (ii) No students are Millionaires
  - (iii) All merchants are speculators
  - (iv) Some musicians are not pianists.
- (b) Explain why, Venn Diagrams and the method of “Logical Analogies” are recognized in Logic.

**Question 5**

- (a) Explain the three basic functions of language.
- (b) Explain the following as they are applied in the definitions of terms
- (i) definiendum
  - (ii) definiens
  - (iii) Definition by genus and difference
  - (iv) Ostensive definitions.

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