

REGISTRATION CENTRE NUMBER		CENTRE NAME		FOLD ← HERE
CANDIDATE'S FULL NAMES				
CANDIDATE'S IDENTIFICATION NUMBER	SUBJECT CODE 0590	PAPER NUMBER 2		
FOR OFFICIAL USE ONLY				
GENERAL CERTIFICATE OF EDUCATION BOARD ORDINARY LEVEL EXAMINATION				
SUBJECT TITLE LOGIC		SUBJECT CODE 0590	PAPER NUMBER 2	
EXAMINATION DATE: JUNE 2025				

Duration : Two and a Half Hours

Answer FIVE questions, taking ALL the THREE Questions from Section A and ANY TWO from Section B. ONLY THE FIRST FIVE QUESTIONS ANSWERED WILL BE MARKED.

All the questions carry 20 marks. For your guidance, the approximate mark for each part of a question is indicated in brackets.

You are reminded of the necessity for good English and orderly presentation in your answers.

In solving, you are advised to show all the steps in your working, giving your answer at each stage.

FOR EXAMINER'S USE ONLY		SCORE
Name of Examiner		
Signature of Examiner:		
Date:		

SECTION A: STRUCTURAL

1. (a) (i) State two values of Logic:

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(ii) What is an idea?

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.....(2x2 marks)

(b) (i) What makes the Subject Term different from the Predicate Term?

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(ii) State the parts of a Hypothetical Proposition:

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.....(2x2 marks)

(c) (i) Differentiate between Truth-Value and Truth-table :

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(ii) State any Indicator of Implication:

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.....(2x2 marks)

(d) Distinguish between the following:

(i) Obvertend and Obverse:

(ii) Mood and Figure:

(e) (i) Define a Dilemma:

(2x2 marks)

(ii) Briefly explain the Fallacy of Appeal to Force:

(2x2 marks)

2. (a) Match the examples of Terms in set "A" to their corresponding types in set "B". Not all the types may be used.

SET A: Terms	SET B: Types
1. Blind and Sight	a. Abstract
2. Rights and Duties	b. Singular
3. The president of Cameroon.	c. Correlative.
4. Happiness	d. Contrary.
	e. Privative

(4x1 marks)

Turn over

(b) (i) When is a Term said to be Undistributed?

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(ii) Give the components of a Hypothetical Proposition:

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..... (2x2 marks)

(c) (i) Name two logicians who contributed to the development of Symbolic Logic:

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(ii) Mention two importance of the use of symbols in Symbolic Logic:

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..... (2x2 marks)

(d) (i) State the rule of Subcontrariety:

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(ii) When is the Fallacy of Illicit Minor committed?

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..... (2x2 marks)

(e) (i) List two forms of a Mixed Hypothetical Syllogism:

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(ii) Define an Informal Fallacy:

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..... (2x2 marks)

3. (a) (i) List two Terms according to Quality:

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(ii) Define Language:

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(b) (i) What determines the Distribution of Terms in a Proposition?

(2x2 marks)

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(ii) What is a Modal Proposition?

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(2x2 marks)

(c) Explain the following concepts as used in Symbolic Logic:

(i) Variables:

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(ii) Braces:

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(2x2 marks)

(d) (i) State the relationship between the "A" and "E" Propositions on the Square of Opposition:

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(ii) Define an Argument:

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(2x2 marks)

Turn over

(e) (i) Briefly explain what a Modus Ponens Argument is :

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(ii) Name any two Fallacies of Relevance:

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(2x2 marks)

SECTION B: PROBLEM SOLVING

4. Study the passage and answer the questions that follow:

Every parent is a counsellor. My father being one, once told me, "hard work is like a cup of milk and luck is like a spoon of sugar". Since the Bible, one of the oldest books of our time declares that God always gives sugar to those who have a cup of milk, these words of wisdom must be unquestionably true. Either I have a cup of milk or God will not give me sugar. Since that day, I resolved to know a good thing when I see one and I don't let it slip away. If I get a chance, I take it and if it changes my life, I let it. But experience shows that life is both good and bad at the same time.

Questions

- (a) (i) Which Law of Thought is violated in the passage above?
(ii) Pick out a universal Term from the passage. (2x2 marks)
- (b) (i) Identify a Disjunctive Proposition in the passage.
(ii) Translate the Proposition in b(i) above into a Hypothetical Proposition. (2x2 marks)
- (c) (i) Using the variables p and q, symbolise this statement: "God gives you sugar if and only if you have a cup of tea".
(ii) Determine the Truth-Value of the symbolized statement in c(i) above given that p is True and q is False (2x2 marks)
- (d) (i) Using "every parent is a counsellor" as the given, infer its Contrary.
(ii) Determine the Major and Minor Terms in the following Syllogism:
"All hardworking persons are successful in life
No lazy persons are successful in life
Therefore, no lazy persons are hardworking persons" (2 x2 marks)
- (e) (i) Draw a Conclusion from the following Premises to produce a Complex Constructive Dilemma:
"If I get a chance, I take it and if it changes my life, I let it.
Either I get a chance or it changes my life".
(ii) Identify the Fallacy most clearly committed in this Argument: "Since the Bible, one of the oldest books of our time declares that God always gives sugar to those who have a cup of milk, these words of wisdom must be unquestionably true". (2x2 marks)

Turn over

5. (a) (i) Classify these Terms under Universal Terms or Particular Terms:
 "Few students; all intellectuals; some girls; every child".
 (ii) Criticise the following Definition: "Happiness is the absence of sadness". (2x2 marks)
- (b) (i) Using the Disjuncts, "Tom is a police officer"; "John is a teacher", construct a Disjunctive Proposition.
 (ii) Express the following Proposition into Standard Form: "Not all Principals are corrupt persons" (2x2 marks)
- (c) (i) Symbolise the statement "Joe is neither in class nor in his office" using the variables p and q.
 (ii) Given the variables; "p" and "q" as False, determine the Truth-Value of $\sim(p \vee q) \cdot q$ (2x2 marks)
- (d) (i) Give the Converse of "All examiners are teachers".
 (ii) Identify and write out the Minor and Major Terms of the Categorical Syllogism below:
 "All musicians are dancers.
 All artists are musicians.
 Therefore, all artists are dancers". (2x2 marks)
- (e) (i) Complete this Argument by providing the Minor Premise and Conclusion to make a Modus Ponens:
 "If the message of righteousness is preached, then people will repent
 (ii) Examine the Argument below and indicate the Fallacy most clearly committed in it:
 "Since nobody has died and come back to prove it, the claim of immortality must be unacceptable." (2x2 marks)
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6. (a) (i) Select the Law of Thought violated in the statement, "I am Tom's kid sister but he is not my brother"
 (ii) "Identify the Operation of the mind employed when a child sees an object and calls it a ball. (2x2 marks)
- (b) (i) Using the Term "Power mongers", as the Predicate Term, "Politicians" as the Subject Term, construct a Particular Negative Proposition.
 (ii) Determine the Distribution of Terms in b (i) above (2x2 marks)
- (c) (i) Given that the variable "J" stands for the statement "Joan will marry" and the variable "M" stands for the statement
 'Mary will be happy', translate the following symbolic statements into Ordinary Language: $(\sim J \vee M)$
 (ii) Given that J is True and M is False, determine the Truth-Value of the statement in c (i) above (2x2 marks)
- (d) (i) Give the Obverse of the Proposition, "Some women are teachers".
 (ii) Clearly write out the Middle Term and Conclusion of the Syllogistic argument below:
 "No fruits are bitter things.
 All oranges are fruits.
 Therefore, No oranges are bitter things" (2x2 marks)
- (e) (i) Transform the Syllogism in d (ii) above into the First Order of Enthymeme.
 (ii) Identify the Fallacy most clearly committed in the following Argument:
 "I can't stop drinking alcohol since my grandmother does so". (2x2 marks)