

REVISED SYLLABUS

0590 LOGIC ORDINARY LEVEL

DATE OF FIRST EXAMINATION:

JUNE 2025 EXAMINATION SESSION

EVALUATION SYLLABUS FOR 0590- LOGIC

Subject Code: 0590

Subject Title: LOGIC

1. INTRODUCTION:

Ordinary Level Logic is designed to train the students in certain fundamental concepts and processes in which the power and applications of Logic are emphasized through an introductory study of both traditional and modern Logic. It is also an indispensable tool for reasoning in all academic disciplines and day-to-day living. As such, it serves as a prerequisite for Advanced Level Philosophy.

AIMS:

The Aims of teaching Logic at the Ordinary Level are to:

- A. Introduce learners to the knowledge and understanding of some basic concepts and procedures in Logic as well as improve on the correct and effective use of language.
- B. Develop in the learners the necessary tools and techniques of acquiring and developing critical thinking skills as well as elementary concepts in Symbolic Logic.
- C. Enable the learners to acquire the ability to organize coherent explanations and arguments.
- D. Introduce learners to the knowledge of, and the ability to identify and detect fallacious reasoning.

3. GENERAL OBJECTIVES

Learners should:

- (1). Understand the central concepts and procedures of Logic and use them in problem-solving and in formulating questions.
- (2). Draw adequate conclusions from observations or given assertions.
- (3). Think coherently, illustrate arguments and explain them adequately.
- (4). Detect errors of thought and be able to correct and avoid making them.
- (5). Use language adequately for effective day-to-day communication.
- (6). Understand the role of Symbolic Logic and its applications.

4. ASSESSMENT OBJECTIVES

The study of Logic at the Ordinary level shall permit the candidates to:

- (a). Recall basic concepts and apply basic principles to specific situations: Ethics, Environment, Economy, Religion, Culture, Management, Jurisprudence, etc.

- (b). Construct coherent arguments and engage in problem-solving.
- (c). Construct and communicate ideas and thought concisely, clearly and coherently.
- (d). Identify and correct errors in reasoning.
- (d). Use and apply signs and symbols to daily-life situations.

Assessment Objectives	Weighting
Knowledge	40 %
Understanding	30 %
Application	20 %
Higher Level Abilities	10 %

5. THE EXAMINATION

The examination will consist of two papers.

PAPER I: MCQs

It will consist of fifty (50) questions, which cover the whole syllabus. Candidates are expected to attempt all the questions. This paper will last for one and a half hours. Each question carries one (1) mark.

PAPER 2: Structural / Problem-Solving Questions

This paper which will last for two and a half hours, shall consist of two sections:

Section A: **Structural Questions** and Section B: **Problem-Solving Questions**.

There will be a total of **SIX (6)** questions, designed to test the candidates' skills in comprehension, interpretation, explanation, and elementary analysis.

THREE questions will be set on Section A, and **THREE** questions on Section B.

Candidates will be required to answer **FIVE (5)** questions, choosing **ALL THREE (3)** questions in section A and any **TWO (2)** questions in section B.

Each question carries 20 marks.

Paper	Mode of Assessment	Weighting	No. of Questions	Duration
1	MCQs	40 %	50	1 ½ hours
2	Structural/Problem-Solving Questions	60 %	6	2½ hours

6. SYLLABUS CONTENT

1.1 MODULE ONE: THE FOUNDATION OF LOGIC

- 1.1.1 Definition and origin of Logic
- 1.1.2 Purpose (value) and Division (types) of Logic
- 1.1.3 Logic and Related Fields
- 1.1.4 Laws of Thought
- 1.1.5 Operations of the Mind

1.2 MODULE TWO: FIRST OPERATION OF THE MIND: SIMPLE APPREHENSION (IDEAS, WORDS AND TERMS)

- 1.2.1 Properties of ideas and Terms
- 1.2.2 Classification of Terms according to quantity and quality
- 1.2.3 Classification of Terms according to definiteness of meaning and relation

1.3 MODULE THREE: DEFINITIONS AND LOGICAL DIVISION

- 1.3.1 The Basic Functions of Language
- 1.3.2 Basic notions of Definition
- 1.3.3 Kinds of Definition
- 1.3.4 Rules and Fallacies of Definition
- 1.3.5 Structure and rules of Logical Division

1.4 MODULE FOUR: THE SECOND OPERATION OF THE MIND: JUDGING (PROPOSITIONS)

- 1.4.1 Definition and Components of a Proposition
- 1.4.2 Properties of Categorical Proposition
- 1.4.3 Distribution of Terms in Categorical Propositions
- 1.4.4 Symbolization and Venn Diagramming of Categorical Propositions.
- 1.4.5 Hypothetical Proposition and Types
- 1.4.6 Disjunctive Proposition and Types
- 1.4.7 Modal Proposition and Types
- 1.4.8 Translating Ordinary Propositions into Standard Forms and Propositions from one form to another.

1.5 MODULE FIVE: INTRODUCTION TO SYMBOLIC LOGIC

- 1.5.1 Basic notions and the importance of Symbolic Logic
- 1.5.2 Connectives and symbols in Symbolic Logic
- 1.5.3 Logical Constants (Truth-Functional Statements)
- 1.5.4 Punctuations in Symbolic Logic
- 1.5.5 Structure of Truth-Tables and their Uses
- 1.5.6 Truth Tables and logical constants (Truth Functional Statements)

SELECTED LOGICAL SYMBOLS IN USE

- Negation (\sim)
- Conjunction (\cdot)
- Disjunction or Alternation (\vee)
- Material Implication (\supset)
- Bi-Conditional or Equivalence (\equiv)

1.6 MODULE SIX: THE THIRD OPERATION OF THE MIND: REASONING (INFERENCE)

- 1.6.1 Methods of Reasoning
- 1.6.2 Definition and types of Inference
- 1.6.3 Forms of Opposition
- 1.6.4 Squares and Truth table for opposition.
- 1.6.5 Forms of Education

1.7 MODULE SEVEN: MEDIATE INFERENCE (ARGUMENTS)

- 1.7.1 Structure of an Argument
- 1.7.2 Validity and Soundness
- 1.7.3 Value of the Syllogism and structure of the Categorical Syllogism
- 1.7.4 The Figures of the Categorical Syllogism
- 1.7.5 Moods of the Categorical Syllogism
- 1.7.6 Representing Categorical Syllogisms on the Venn Diagram
- 1.7.7 Translating Categorical Arguments into Standard-Forms
- 1.7.8 The General Rules of the Syllogism and Fallacies

1.8 MODULE EIGHT: OTHER TYPES OF ARGUMENTS

- 1.8.1 The Enthymeme
- 1.8.2 The Hypothetical Syllogism
- 1.8.3 The Disjunctive Syllogism
- 1.8.4 Definition, nature, and importance of the dilemma
- 1.8.5 Constructive dilemma
- 1.8.6 Destructive dilemma

1.9 MODULE NINE: INFORMAL FALLACIES

- 1.9.1 Definition, classification, and significance of Fallacies
- 1.9.2 Fallacies of Relevance: Fallacies of no evidence
- 1.9.3 Fallacies of Relevance: Fallacies of little evidence
- 1.9.4 Fallacies of Ambiguity

7. TEXTBOOKS AND REFERENCES

1. Copi M.I. and Cohen: Introduction to Logic, Macmillan Co. Inc., N.Y.2016.
2. Layman C. S.: The Power of Logic, McGraw Hill Higher Education, N.Y., 2005.
3. Moore B. N. and Parker R.: Critical Thinking, McGraw Hill Higher Education, N.Y.,2000.
4. Hurley (Patrick J): A concise Introduction to Logic, Wadsworth Cengage Learning, 2023 (Eleventh Edition).
5. Luce A.A: Logic-Teach Yourself Books, Hodder and Stoughton Ltd, London, 1958.
6. Hausman, Boardman and Kahane (2021): Logic and Philosophy: A modern Introduction. Hackett Publishing Company.