

**UNIVERSITY OF MADRAS**  
**B.A. DEGREE PROGRAMME IN PHILOSOPHY**  
 SYLLABUS WITH EFFECT FROM 2023-2024

**Elective – IV Generic/Disciplinary Specific**  
**SYMBOLIC LOGIC**

Subject Code	Subject Name	Category	L	T	P	S	Credits	Inst. Hours	Marks		
									CIA	External	Total
209E4A	Symbolic Logic	Elective	Y	-	-	-	3	3	25	75	100
Pre - requisite	Knowing Epistemology										

<b>Learning Objectives</b>	
LO1	To make the students aware of reasoning / inference and its kinds in the west
LO2	To enable the students to comprehend the core ideas of mediate and immediate inference
LO3	To make the students aware of modern Symbolic logic and Predicate logic
LO4	Understand the differences, rules & fallacies of immediate and mediate syllogism
LO5	Enunciate the core concepts of symbolic logic

Units	<b>Course Syllabus</b>
Unit – 1	Definition of Symbolic Logic, its relation with Traditional Logic – Elements of Propositional Logic: Sentences – Propositions – Modern Classifications – Truth-value and Truth-functions.
Unit – 2	Use of Symbols in Propositional Logic – variables, Constants, Conjunction, Implication, Disjunction – Bi-conditional and Negation. Truth-Table Method - Decision Procedures – Basic Truth tables – Direct Truth-table, Indirect Truth-table, Case-analysis.
Unit – 3	Rules of Inference and Rules of Equivalence – Natural Deduction method – Conditional Proof method – reductio ad absurdum method – Jaffrey’s Truth-tree method.
Unit – 4	Predicate Logic – General Proposition – Expression of Four Traditional Propositions in Predicate Symbolic Form –Use of U.I, U.G, E.G, E.I rules and their restrictions.
Unit – 5	Tests of reasoning: Applications of Principles of Symbolic Logic Training in (a) Verbal; (b) Non-verbal; (c) Analogy tests; (d) Series tests; (e) Odd man out; (f) Jumble Spelling test.

<b>Course out Come:</b>	
1.	To increase proficiency in reasoning and to distinguish between valid and invalid arguments.
2.	To apply these principles in reasoning tests which are commonly administered in several competitive exams.
3.	Empowers and enables students with the ability to take what information they are given and build upon it.
4.	Logical reasoning encourages students to think for themselves, experiment, and even ask the big, out- of-the-box questions.
5.	Logic shapes every choice of our daily lives. Logical thinking enables someone to learn and make decisions that affect their way of life.

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<b>Books for Reading:</b>
1. Irving M. Copi & Carl Cohen, Introduction to Logic.
2. P. Balasubramanian, An Invitation to Symbolic Logic.
3. Barson, A. H. and O'Connur, Introduction Symbolic Logic.
4. P. Balasubramanian, Symbolic Logic and Decision Procedures.
5. Competition Success Review (2004-till date), Competition Success Rrview, Mumbai

<b>Reference Book:</b>
1. Competition world (2004-till date), S. Chand co., New Delhi.
2. I. M. Copi, Symbolic Logic.
3. R. S. Agarwal, A modern Approach to verbal and Non verbal reasoning

<b>Web Resources</b>
1. <a href="https://study.com/academy/lesson/symbolic-logic-definition">https://study.com/academy/lesson/symbolic-logic-definition</a>
2. <a href="https://www.maa.org/sites/default/files">https://www.maa.org/sites/default/files</a>
3. <a href="https://www.philosophy-index.com/logic/symbolic/">https://www.philosophy-index.com/logic/symbolic/</a>

**Mapping with Programme Outcomes:**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PO 9</b>	<b>PO 10</b>
<b>CO 1</b>	1	1	1	1	1	1	1	1	2	1
<b>CO 2</b>	2	2	2	2	2	2	2	2	2	2
<b>CO 3</b>	2	3	3	3	3	3	3	3	3	3
<b>CO 4</b>	2	3	3	3	3	3	3	3	3	2
<b>CO 5</b>	2	3	3	3	3	3	3	3	3	2

**Strong (3)      Medium (2)      Low (1)**

**Mapping with Programme Specific Outcomes:**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>
<b>CO 1</b>	1	1	1	1	1	1	1	1	1	1
<b>CO 2</b>	2	2	2	2	2	2	2	2	2	2
<b>CO 3</b>	3	3	3	3	3	3	3	3	3	3
<b>CO 4</b>	3	3	3	3	3	3	3	3	3	3
<b>CO 5</b>	3	3	3	3	3	3	3	3	3	3
<b>Weightage</b>	12	12	12	12	12	12	12	12	12	12
<b>Weighted percentage of course contribution to POS</b>	5-0	5-0	5-0	5-0	5-0	5-0	5-0	5-0	5-0	5-0

**Strong (3)      Medium (2)      Low (1)**