

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
(Affiliated to Savitribai Phule Pune University, Pune)



Choice Based Credit System (CBCS)

Bachelor of Arts (B. A.)

Syllabus of

F. Y. B. A. Logic & Principles of Reasoning

Implemented from

Academic year 2021 -22

Programme Structure and Course Titles

Sr. No.	Class	Semester	Course Code	Course Title	Credits
1.	F.Y.B.A.	I	BA-LOG101T	Traditional Logic	03
2.	F.Y.B.A.	II	BA-LOG201T	Propositional Logic	03
3.	S.Y.B.A.	III	BA-LOG301T	Deductive Proof	03
4.	S.Y.B.A.	IV	BA-LOG401T	Quantification and Relational Logic	03
5.	T.Y.B.A.	V	BA-LOG501T	Logic and Methodology of Science - I	03
6.	T.Y.B.A.	VI	BA-LOG601T	Logic and Methodology of Science - II	03

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F. Y. B. A. Logic & Principles of Reasoning

Under

Faculty of Arts and Humanities

Semester -I	Paper -I
Course Code: BA-LOG101T	Title of the Course - Traditional Logic
Credits: 03	Total Lectures: 45 Hrs.

Traditional Logic

Objectives:

1. To explain the basic principles of correct reasoning.
2. To provide students ample scope to exercise their reasoning based on the above principles.
(Traditional logic)
3. Introduction to logic as branch of philosophy.
4. To explain the Concept of logic, Utility of logic and Brief history of logic

Outcomes:

- 1) The students will become adept in identifying valid arguments as against invalid arguments.
- 2) Precision in expressing propositions and arguments.
- 3) Ability to abstract the logical form of propositions and arguments.
- 4) To enhance articulate communication skills.

Credit -1. The nature of logic as the study of inference:

- 1) Logic and Daily Life.
- 2) Formal characteristics of logic.
- 3) Proposition and Proposition form; Argument and argument form; difference between proposition and sentences.
- 4) Basic issues / concepts from Indian traditions of logic: theory of interference.

Credit -2. Traditional Western understanding of propositions and its classification:

- 1) Basic subjects, Predicate structure and its components: subject term, predicate term, copula, quantifiers.
- 2) Classification of propositions: categorical, hypothetical, disjunctive.
- 3) Four-fold-scheme of categorical proposition.
- 4) Distribution of terms in A, E, I, O propositions.

Credit -3. Traditional Western understanding of Inference and its classification:

- 1) Immediate inference: Opposition, conversion, obversion.
- 2) Mediate inference: Categorical syllogism, mixed disjunctive syllogism, mixed hypothetical syllogism, dilemma,

Suggested Readings:

- a) I.M. Copi, Introduction to logic (truth edition), Macmillan company, New York.
- b) Athale and Bodas, Tarkasangraha, (Relevant chapters)
- c) Copi I.M. Symbolic Logic (6th edition), Macmillan company, New York.
- d) Vidyabhushan S.C., History of Indian Logic, Motilal Banarsidas, 1978.
- e) Stephen Barker, Elements of Logic.
- f) बी. एस. दर्यापूरकर व भूपाळी दर्यापूरकर, पारंपरिक तर्कशास्त्र, फडके प्रकाशन, कोल्हापूर, १९७८.
- g) बी. आर. जोशी, एस. व्ही. कुलकर्णी आणि इ. आर. मठवाले, तर्कविद्या : भाग-एक, स्वाती प्रकाशन, पूर्ण, २००२.

F. Y. B. A. Logic & Principles of Reasoning

Semester – II

<i>Semester -I</i>	<i>Paper -I</i>
Course Code: BA-LOG201T	Title of the Course - Propositional Logic
Credits: 03	Total Lectures: 45 Hrs.

Propositional Logic

Objectives:

- 1) To introduce the students, the life- Sketch, personality and the thoughts of Mahatma Gandhi for the development of student's nature as per the value-based education of Gandhian Philosophy.
- 2) To convey the importance of Gandhian values in different walks of life.
- 3) To create awareness about the significance of Gandhian philosophy for academicians and life in general in students and common stakeholders.
- 4) Preparation of competitive examination regarding Gandhian philosophy.

Outcomes:

- 1) The students will become adept in identifying valid arguments as against invalid arguments.
- 2) Precision in expressing propositions and arguments.
- 3) Ability to abstract the logical form of propositions and arguments.
- 4) To enhance articulate communication skills.

Credit -1. Symbolic logic:

- a) Nature, scope and its applications.
- b) Modern classification of Propositions:
 - 1) Simple
 - 2) Truth Functionally compound
- c) Nature and use of:
 - 1) Propositional variables
 - 2) Logical constants
- d) Symbolize propositions using the above.

Credit -2. Basic truth functions:

- a)
 - 1) Material implication
 - 2) disjunction
 - 3) conjunction
 - 4) Material equivalence
 - 5) Negation
- b) Use of basic truth-table
- c) Propositional forms: tautology, contradiction, contingency

Credit -3. Decision Procedure:

- a) Nature and types of Decision procedure: Truth table, shorter truth table.
- b) Use of decision procedure to identify proposition forms.
- c) Deductive Proof: Direct, Indirect and Conditional Proof
- d) Solve the arguments using the above kinds of proof.

Suggested Readings:

- a) I.M. Copi, Introduction to logic (truth edition), Macmillan company, New York.
- b) Athale and Bodas, Tarkasangraha, (Relevant chapters)
- c) Copi I.M. Symbolic Logic (6th edition), Macmillan company, New York.
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