

SAURASHTRA UNIVERSITY

DEPARTMENT OF PHYSICS
SAURASHTRA UNIVERSITY
RAJKOT



M.Sc. (Physics)
(effective from July 2002)

COURSE STRUCTURE, REGULATIONS
&
SYLLABI



FACULTY OF ARTS
ORDINANCES AND REGULATIONS
FOR THE DEGREE
OF
MASTER OF PHILOSOPHY
(Semester System)

IN FORCE FROM
JUNE – 2006

SAURASHTRA UNIVERSITY



PSYCHOLOGY

MASTER OF PHILOSOPHY
(Semester System)

IN FORCE FROM
JUNE – 2006
MASTER OF PHILOSOPHY
PHILOSOPHY

Semester I

PAPER –I RESEARCH METHODOLOGY
PAPER –II ADVANCED MATHEMATICAL LOGIC

Semester II

PAPER –III CONTEMPORARY PHILOSOPHY OF SCIENCE.

or

PAPER –III CONTEMPORARY ANALYTIC METHPHYSICS

or

INDIAN DIALATIC

PAPER –IV DISSERTATION

M.PHIL. PAPER –I RESEARCH METHODOLOGY

Unit-1 The meaning and interpretation of Research in Philosophy. the logical connection of research with invention and discovery.

- Unit-2 The nature of philosophical research –pure research construction of a philosophical system or principle from un schematized philosophical ideas and trends.
- Unit-3 The nature of the development and evolution of Philosophical research-Methodology of Dialectic and polemic. Historical examples from Indian philosophy. Navya Nyaya Method for the search of definition : case study of (i)The definition of svayamprakashtva in citsukhi (ii) Gangesh definition of vyapti.
- Unit-4 Interpretation and evolution of a philosophical position or principle in contemporary reference. case study: interpretation of Kant by Michel Fridmann and Navya Nyaya by matilal.
- Unit-5 Research in the area of definite knowledge- Logical syntax Hypothetico-deductive/Axiomatic approach Research in the foundation of set-thory and mathematics. Research in the methodology.
- Unit-6 Applied Research-social /cultural and Historical interpretation-Foucault, Derrida and Habermass approaches-evolution-construction of philosophical principles in contemporary Indian thoughts.

Books

- (1) Soloman E. Indian Dialectic
- (2) Popper K. The Logic of Scientific discovery.
- (3) Friedman. M. Kant and exact Science.
- (4) Passomore J. Philosophical reasoning
- (5) Matilal B. Language logic and Reality.
- (6) Matilal B. The docttine of negation in Navya-Nyaya
- (7) Gangesh. Tattvacintamani
- (8) Citsukha. Citsukhi.
- (9) Rosenbery . Contemporary readings in philosophy of science.
- (10) Carnap R. Meaning and necessity.
- (11) Carnap R. Logical foundation of probability.

- (12) Carnap R. The logical syntax of language.
(13) Cambridge Companion of Foucault.
(14) Cambridge Companion of Hebermaus.
(15) Cambridge Companion of Derridu.

M.PHIL. PAPER –II
ADVANCED MATHEMATICAL LOGIC

1. Primitive recursive functions-course of value recursion
uniformity-Gödel's B-function number theoretic formalism.
2. Arithmatization of meta mathematics-Recursive meta
mathematical definitions. Inductive and recursive
definition.
3. General Recursive functions- formal calculation-
Arithmatization of formalism.
4. The μ -operator, enumeration, diagonal procedure.
5. Church's theorem, the generalized Gödel's theorem.
6. Symmetric form of Gödel's theorem.

Books:

1. Kleene S.C.(1952) Introduction to meta
mathematics
2. Kleene S.C.(1952) Mathematical Logic
3. Manin Y.I. (1977) A Course in Mathematical Logic
4. Church A. (1952) Introduction to mathematical
Logic

1. post-logical positivistic status of analysis questions of semantics Carnap and Quine on semantics and modal logic.
2. semantics and modality-possible worlds counterfactuals – David Lewis'view.
3. Kripke's view on semantical consideration on modal logic quantification in modal logic metaphysical implication.
4. Time-MacTaggarl's view unreality A- theory and B-theory.
5. Relativity of time- The direction of time Reichenbach's view.
6. Realism and anti-realism view of Michael Dummett and Hilary Putnam.

Books:

1. Michael J. Loux :Metaphysics :Contemporary reading
2. Michael J. Loux :Metaphysics :An introduction
3. Carnap R. : Empiricism, semantics and ontology.
4. Kripke : Semantical consideration on modal logic.
5. Reichenbach H. : The direction of time.

CONTEMPORARY PHILOSOPHY OF SCIENCE.

1. Nature and status of philosophy of science-Methodology of science.
2. Popper's criterion of falsification-potential falsifiers-asymmetry. between verification and falsification.
3. Nature of scientific explanation Carl Hempel's view on scientific explanation.
4. Nature of scientific theories Nagel's view on the cognitive status of scientific theories.
5. Relativity of space and time Godel's argument-contemporary views.
6. Interpretation of quantum mechanics- Copenhagen and many-world interpretation.

Books

- (1) Popper K. :The Logic of Scientific discovery.
- (2) Hempel Karl :Two models of scientific explanation.
- (3) Nagel Ernest : The structure of science.
- (4) Popper Karl : Quantum mechanics and schism in physics.
- (5) Schlipp Paul : Albert Einstein –A philosopher scientist.

1. Rational background of Indian philosophy methodology of Dialectic Vakyovakya in Upanisads-Dialectic in Ramayan and Mahabharata.
2. Dialectic in Indian Medical Science and law.
3. Dialectic in Budhistic Philosophy Nagarjun's Vighraha Vyavartini and Madhyamika Karika.
4. Dialectic in Harsa and Jayarshi bhatta possibility of knowledge.
5. Dasha-vidya Mahanuman and dialatic.
6. Dialectic in Navya-Nyaya techniques and implications.

Books

1. Soloman E.S. : Indian Dialectic Vo I-II
2. Harsa. : Khandan khanda khadya.
3. Bhatti jayrashi : Tattvopaplavasin.
4. Nagarjan : Vighraha vyavartini and Madyamika karika
5. Gyha : Navya-Nyaya system logic.

