NORTH MAHARASHTRA UNIVERSITY, JALGAON

Syllabus for F.Y.B.A.

GENERAL PAPER - I

LOGIC AND METHODOLOGY OF SCIENCE (Alternative Course)

Propositional Logic :

1. Nature of Logic, Logic as a formal science, Argument and argument form truth and validity.

    (Total Periods - 8)

2. Modern classification of propositions, Symbolization of propositions, Truth - Functional connective - Negation, Conjunction, Disjunction (Strong and Weak), Implication and logical equivalence, Its basic truth tables.

    (Total Periods- 14)

3. Statement Forms - Tautology, Contradictory and Contingent

    (Total Periods - 8)

4. Decision Procedures - Truth table, Shorter truth table and truth tree method.

    (Total Periods - 23)

5. The stroke and dagger operators, Rewriting logical connectives interns of stroke/dagger functions.

    (Total Periods - 10)

6. The use of dots as brackets, Polish notations, Rewriting logical operators i.e. - Negation, Conjunction, Disjunction, Implication and equivalence - interms of polish notations.

    (Total Periods - 8)

7. Method of deduction - Rules of inference and rules of replacement, Direct deductive proof conditional and indirect proofs.

    (Total Periods - 25)

Books for reading and reference :

1. Introduction to Logic - (New edition)
    I.M.Copi and Cohen.
2. Symbolic Logic - (New edition)
    I.M.Copi and Cohen.
3. Elements of formal logic - Hughes and Londey - relevant chapter only.

4. तर्करेखा भाग-१ - डॉ. बारलिंगि व डॉ. मराठे.

5. तर्करेखा भाग-२ - डॉ. बारलिंगि व डॉ. मराठे.

6. सुगम आकारिक तर्कशास्त्र - डॉ. श्री. र. काचळे व डॉ. लिला गोळे.

7. आकारिक तर्कशास्त्र - प्रा. मै. पु. रेगे.

8. Methods of Logic (Revised edition) - relevant chapters only
    Quine W.V.O.

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