U. P. EDUCATION SERVICE SELECTION COMMISSION, PRAYAGRAJ

Syllabus

LOGIC–PGT (Secondary Education)

(Subject Code-26)

1. Logic : Definition, Nature and scope, Deductive and Inductive argument, Premises and conclusion, Sentence. Statement and proposition, Truth and Validity Logical fallacies: informal and formal.
2. Functions of Language, Agreement and disagreement in language, kinds of definition, denotation and connotation of terms, Definition by Genus and Differentia.
3. Proposition: Quality and quantity, Distribution; classical or Aristotelian classification of propositions, square of oppositions, existential import and Boolean interpretation of propositions.
4. Deductive arguments: Immediate and mediate argument. Immediate deductive argument: Conversion obversion and contraposition, mediate deductive argument: categorical syllogism, disjunctive syllogism, hypothetical syllogism, categorical syllogism: figure, mood, proving validity of syllogism by Venn diagram, six rules and fallacies, Translating ordinary sentence into 4 logical standard form of propositions.
5. Uses and Function of symbols in logic, simple and compound propositions: conjunction, disjunction, negation, material implication, material equivalence, logical equivalence, Truth table , tautology, contradiction and contingent, paradox of material implication,DeMorgan'sTheorms, Laws of thought.
6. Formal deduction:Rules of inference and rules of replacement for proving validity and invalidity of argument,Indirect Proof, Conditional proof.
7. Qualification: Generalization instantiation, Propositional variable and propositional constant, 4 rules of qualification, Rules of quantifier negation: symbolizing relation, and kinds of relation.
8. InductiveLogic: analogical argument, Mill's experimental method, of causation, nature of Hypothesis: scientific and unscientific.