Syllabus for Mathematics Master's

Section 1: Subject Knowledge

Please Note: A Total of 26 Questions will be asked, combining the following topics, with the difficulty level commensurate to a Master's Candidate.

Unit I: Real analysis Analysis, Linear Algebra.

Unit II: Complex analysis Complex Analysis, Taylor series, Laurent series, calculus of residues. Algebra, Groups, Rings, Fields, Topology.

Unit III: Calculus

Ordinary Differential Equations (ODEs), Partial Differential Equations (PDEs), Calculus of Variations, Linear Integral Equations, Classical Mechanics.

Unit IV: Statistics

Descriptive statistics, exploratory data analysis, Tests of hypotheses, Data reduction techniques, 2K factorial experiments, Steady-state solutions of Markovian queuing model.

Section 2: Fundamental Skills

Please Note: A Total of 24 Questions will be asked, combining the following topics, with the difficulty level commensurate to a Master's Candidate.

Unit I: Data Analysis Unit II: Math and Statistics Unit III: Lab skills Unit IV: Reading and Writing

Section 3: Specific Skill Proficiency

This section has more than 30 skills. You can select the ones you are proficient in from the enrollment form. You can choose a maximum of 4 skills. Each skill contains 10 questions.

