

Agnihotri Engineering & GATE Classes

Scripting success stories

GENIUS-20 HUNT TEST SYLLABUS

FOR ALL BRANCHES

(EC,EI,EE,BM,CS,IT,MECHANICAL,CIVIL,PETROCHEMICAL)

ENGINEERING MATHEMATICS

Probability: Conditional Probability; Mean, Median, Mode and Standard Deviation; Random Variables; Distributions; uniform, normal, exponential, Poisson, Binomial.

Set Theory & Algebra: Sets; Relations; Functions; Groups; Partial Orders; Lattice; Boolean Algebra.

Combinatory: Permutations; Combinations; Counting; Number system

Linear Algebra: Algebra of matrices, determinants, systems of linear equations, Eigen values and Eigen vectors.

Numerical Methods: LU decomposition for systems of linear equations; numerical solutions of non-linear algebraic equations by Secant, Bisection and Newton-Raphson Methods; Numerical integration by trapezoidal and Simpson's rules.

Calculus: Limit, Continuity & differentiability, Mean value Theorems, Theorems of integral calculus, evaluation of definite & improper integrals, Partial derivatives, Total derivatives, maxima & minima.

Transform Theory: Fourier transform, Laplace transform, Z-transform.

Differential equations: First order equation (linear and nonlinear), Higher order linear differential equations with constant coefficients, Method of variation of parameters, Cauchy's and Euler's equations, Initial and boundary value problems, Partial Differential Equations and variable separable method.

Complex variables: Analytic functions, Cauchy's integral theorem and integral formula, Taylor's and Laurent' series, Residue theorem, solution integrals.

GENERAL APTITUDE

Verbal Ability: English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction.