

TGTRANSCO AE Syllabus 2024 (Expected)

The TGTRANSCO AE syllabus covers general aptitude issues as well as essential technical disciplines such as electrical, electronic, and civil engineering. It covers a wide range of themes and disciplines to assess candidates' knowledge and competence for the Assistant Engineer position. The expected syllabus information are listed in the following table:

Section	Topics
TGTRANSCO AE Syllabus for Section A (Electrical Engineering)	Engineering Mathematics
	Linear Algebra
	Differential Equations
	Calculus
	Probability and Statistics
	Complex Variables
	Numerical Methods
	Transform Theory
	Electric Circuits
	Network Graph, KCL, KVL, Node, and Mesh Analysis
	Transient Response of DC and AC Networks

	Sinusoidal Steady-State Analysis
	Resonance
	Passive Filters
	Ideal Current and Voltage Sources
	Thevenin's Theorem, Norton's Theorem, Superposition Theorem
	Signals and Systems
	Representation of Continuous and Discrete-Time Signals
	Shifting and Scaling Operations
	Linear Time Invariant and Causal Systems
	Fourier Series Representation of Continuous Periodic Signals
	Sampling Theorem
	Applications of Fourier Transform, Laplace Transform, and z-Transform
	Electromagnetic Fields
	Coulomb's Law, Electric Field Intensity, Electric Flux Density

	Gauss's Law, Divergence, Electric Field and Potential Due to Point, Line, Plane, and Spherical Charge Distributions
	Effect of Dielectric Medium, Capacitance of Simple Configurations
	Biot-Savart's Law, Ampere's Law, Curl
	Faraday's Law, Lorentz Force, Inductance
	Power Systems
	Power Generation Concepts
	AC and DC Transmission Concepts
	Models and Performance of Transmission Lines and Cables
	Series and Shunt Compensation, Electric Field Distribution, and Insulators
	Distribution Systems
	Per-Unit Quantities
	Bus Admittance Matrix, Gauss-Seidel and Newton Raphson Load Flow Methods

	Voltage and Frequency Control
	Power Factor Correction
	Symmetrical Components, Symmetrical and Unsymmetrical Fault Analysis
	Analog and Digital Electronics
	Characteristics of Diodes, BJT, MOSFET
	Simple Diode Circuits: Clipping, Clamping, Rectifiers
	Amplifiers: Biasing, Equivalent Circuit, and Frequency Response
	Oscillators and Feedback Amplifiers
	Operational Amplifiers: Characteristics and Applications
	Simple Active Filters, VCOs, and Timers
	Combinational and Sequential Logic Circuits
	Multiplexer
	Analytical & Numerical Ability

TGTRANSCO AE Syllabus for Section B (General Awareness and Numerical Ability)	General Awareness
	English
	Related to Telangana Culture & Movement
	Computer Knowledge