



ACE

Engineering Academy

GATE-2021 Online Test Series

Electrical Engineering - Schedule

No. of Test : 67 (25 Topic wise Tests + 30 Grand Tests + 12 Full Length Mock Tests)

+ **Free** 55 practice Tests of GATE-2020 Online Test Series

Topic wise Tests

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
Test-01	Engineering Mathematics-1: Linear Algebra, Calculus, Differential Equations.	15	25	45 mins	03-06-2020
Test-02	Engineering Mathematics-2: Complex Variables, Probability and Statistics.	15	25	45 mins	
Test-03	Control systems-1: Feedback principle, transfer function, Block diagrams and Signal flow graphs, Transient and Steady-state analysis of linear time invariant systems, Routh-Hurwitz, Root loci and Stability analysis	15	25	45 mins	
Test-04	Control systems-2: Mathematical modeling and representation of systems, and Nyquist criteria, Bode plots, Lag, Lead and Lead-Lag compensators; P, PI and PID controllers; State space model, State transition matrix.	15	25	45 mins	
Test-05	Signals and Systems-1: Representation of continuous and discrete-time signals, Shifting and scaling operations, Linear Time Invariant and Causal systems, Fourier series representation of continuous and discrete periodic signals, R.M.S. value, average value calculation for any general periodic waveform. Applications of Fourier Transform continuous and discrete time signals.	15	25	45 mins	10-06-2020
Test-06	Signals and Systems-2: Sampling theorem, Applications of Laplace Transform and z-Transform.	15	25	45 mins	
Test-07	Analog Electronics-1: Simple diode circuits: clipping, clamping, rectifiers; Amplifiers: biasing, equivalent circuit and frequency response; Digital Electronics-1: Combinational and Sequential logic circuits, Multiplexer, Demultiplexer, Schmitt trigger	15	25	45 mins	
Test-08	Analog Electronics-2: Oscillators and feedback amplifiers; operational amplifiers: characteristics and applications; single stage active filters, Active Filters: Sallen Key, Butterworth, VCOs and timers. Digital Electronics-2: Sample and hold circuits, A/D and D/A converters.	15	25	45 mins	
Test-09	Electrical Circuits-1: Network elements: ideal voltage and current sources, dependent sources, R, L, C, M elements; Network solution methods: KCL, KVL, Node and Mesh analysis; Network Theorems: Thevenin's, Norton's, Superposition and Maximum Power Transfer theorem;	15	25	45 mins	17-06-2020
Test-10	Electrical Circuits-2: Transient response of dc and ac networks, sinusoidal steady-state analysis, resonance, two port networks, balanced three phase circuits, star-delta transformation, complex power and power factor in ac circuits.	15	25	45 mins	
Test-11	Electrical Machines-1: Single phase transformer: equivalent circuit, phasor diagram, open circuit and short circuit tests, regulation and efficiency; Three-phase transformers: connections, vector groups, parallel operation; Auto-transformer,	15	25	45 mins	
Test-12	Electrical Machines-2: Three-phase induction machines: principle of operation, types, performance, torque-speed characteristics, no-load and blocked-rotor tests, equivalent circuit, starting and speed control; Operating principle of single-phase induction motors;	15	25	45 mins	
Test-13	Electrical Machines-3: Electromechanical energy conversion principles; DC machines: separately excited, series and shunt, motoring and generating mode of operation and their characteristics, speed control of dc motors.	15	25	45 mins	
Test-14	Electrical Machines-4: Synchronous machines: cylindrical and salient pole machines, performance and characteristics, regulation and parallel operation of generators, starting of synchronous motors; Types of losses and efficiency calculations of electric machines.	15	25	45 mins	

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
Test-15	Power Systems-1: Power generation concepts, Per-unit quantities, Bus admittance matrix, Gauss-Seidel and Newton-Raphson load flow methods, Voltage and Frequency control, Symmetrical components, Symmetrical and unsymmetrical fault analysis.	15	25	45 mins	24-06-2020
Test-16	Power Systems-2: System stability concepts, Equal area criterion, Models and performance of transmission lines and cables, Series and shunt compensation, Power factor correction.	15	25	45 mins	
Test-17	Power Systems-3: Electric field distribution and insulators, Distribution systems, ac and dc transmission concepts, Economic Load Dispatch (with and without considering transmission losses) Principles of over-current, differential, directional and distance protection; Circuit breakers	15	25	45 mins	
Test-18	Power Electronics-1: Static V-I characteristics and firing/gating circuits for Thyristor, MOSFET, IGBT; Single and three-phase configuration of uncontrolled rectifiers; Voltage and Current commutated Thyristor based converters; Magnitude and Phase of line current harmonics for uncontrolled and thyristor based converters; Power factor and Distortion Factor of ac to dc converters;	15	25	45 mins	
Test-19	Power Electronics-2: DC to DC conversion: Buck, Boost and Buck-Boost converters; Bidirectional ac to dc voltage source converters, Single phase and three phase inverters, Sinusoidal pulse width modulation.	15	25	45 mins	
Test-20	Measurements-1: Bridges and Potentiometers, Measurement of voltage, current, power, energy and power factor; Instrument transformers, Error analysis.	15	25	45 mins	01-07-2020
Test-21	Measurements-2: Digital voltmeters and multimeters, Phase, Time and Frequency measurement; Oscilloscopes	15	25	45 mins	
Test-22	Electromagnetic Fields-1: 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	15	25	45 mins	
Test-23	Electromagnetic Fields-2: Biot-Savart's law, Ampere's law, Curl, Faraday's law, Lorentz force, Inductance, Magnetomotive force, Reluctance, Magnetic circuits, Self and Mutual inductance of simple configurations.	15	25	45 mins	
Test-24	Verbal Ability: Basic English grammar: tenses, articles, adjectives, prepositions, conjunctions, verb-noun agreement, and other parts of speech Basic vocabulary: words, idioms, and phrases in context Reading and comprehension Narrative sequencing	15	25	45 mins	
Test-25	Numerical Ability: Quantitative Aptitude: Data interpretation: data graphs (bar graphs, pie charts, and other graphs representing data), 2- and 3-dimensional plots, maps, and tables Numerical computation and estimation: ratios, percentages, powers, exponents and logarithms, permutations and combinations, and series Mensuration and geometry Elementary statistics and probability. Analytical Aptitude: Logic: deduction and induction Analogy Numerical relations and reasoning Spatial Aptitude: Transformation of shapes: translation, rotation, scaling, mirroring, assembling, and grouping Paper folding, cutting, and patterns in 2 and 3 dimensions.	15	25	45 mins	

Subject Wise Grand Tests - 1st Series

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
Test-26	Engineering Mathematics	30	50	90 mins	15-07-2020
Test-27	Control systems	30	50	90 mins	
Test-28	Signals & Systems	30	50	90 mins	22-07-2020
Test-29	Digital Electronics	30	50	90 mins	
Test-30	Electrical Circuits	30	50	90 mins	29-07-2020
Test-31	Electrical Machines	30	50	90 mins	
Test-32	Analog Electronics	30	50	90 mins	05-08-2020
Test-33	Power Systems	30	50	90 mins	
Test-34	Measurements	30	50	90 mins	11-08-2020
Test-35	Electromagnetic Fields	30	50	90 mins	
Test-36	Power Electronics	30	50	90 mins	14-08-2020
Test-37	General Aptitude	30	50	90 mins	

Full Length Mock GATE Test - 1st Series (As per GATE pattern)

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
Test-38	Full Length GATE Mock Test-1	65	100	180 mins	19-08-2020
Test-39	Full Length GATE Mock Test-2	65	100	180 mins	26-08-2020
Test-40	Full Length GATE Mock Test-3	65	100	180 mins	02-09-2020

Subject Wise Grand Tests - 2nd Series

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
Test-41	Engineering Mathematics	30	50	90 mins	09-09-2020
Test-42	Control systems	30	50	90 mins	
Test-43	Signals & Systems	30	50	90 mins	16-09-2020
Test-44	Digital Electronics	30	50	90 mins	
Test-45	Electrical Circuits	30	50	90 mins	23-09-2020
Test-46	Electrical Machines	30	50	90 mins	
Test-47	Analog Electronics	30	50	90 mins	30-09-2020
Test-48	Power Systems	30	50	90 mins	
Test-49	Measurements	30	50	90 mins	07-10-2020
Test-50	Electromagnetic Fields	30	50	90 mins	
Test-51	Power Electronics	30	50	90 mins	10-10-2020
Test-52	General Aptitude	30	50	90 mins	

Full Length Mock GATE Tests- 2nd Series

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
Test-53	Full Length GATE Mock Test-4	65	100	180 mins	14-10-2020
Test-54	Full Length GATE Mock Test-5	65	100	180 mins	21-10-2020
Test-55	Full Length GATE Mock Test-6	65	100	180 mins	28-10-2020

Multi-Subject Wise Grand Tests

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
Test-56	Electrical Circuits & Electromagnetic Fields	30	50	90 mins	04-11-2020
Test-57	Control systems & Signals & Systems	30	50	90 mins	
Test-58	Power Electronics & Analog Electronics	30	50	90 mins	11-11-2020
Test-59	Electrical Machines & Digital Electronics	30	50	90 mins	
Test-60	Measurements & Power Systems	30	50	90 mins	18-11-2020
Test-61	Engineering Mathematics & General Aptitude	30	50	90 mins	

Full Length Mock GATE Tests - 3rd Series

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
Test-62	Full Length GATE Mock Test-7	65	100	180 mins	02-12-2020
Test-63	Full Length GATE Mock Test-8	65	100	180 mins	09-12-2020
Test-64	Full Length GATE Mock Test-9	65	100	180 mins	04-01-2021
Test-65	Full Length GATE Mock Test-10	65	100	180 mins	11-01-2021
Test-66	Full Length GATE Mock Test-11	65	100	180 mins	18-01-2021
Test-67	Full Length GATE Mock Test-12	65	100	180 mins	25-01-2021

Free Practice Tests of GATE-2020 Online Test Series

Topic wise Tests

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
EE_P01	Engineering Mathematics-1: Linear Algebra, Calculus, Differential Equations.	15	25	45 mins	20-04-2020
EE_P02	Engineering Mathematics-2: Complex Variables, Numerical Methods, Probability and Statistics & Transform Theory.	15	25	45 mins	
EE_P03	Control systems-1: Feedback principle, transfer function, Block diagrams and Signal flow graphs, Transient and Steady-state analysis of linear time invariant systems, Routh-Hurwitz, Root loci and Stability analysis	15	25	45 mins	
EE_P04	Control systems-2: Mathematical modeling and representation of systems, and Nyquist criteria, Bode plots, Lag, Lead and Lead-Lag compensators; P, PI and PID controllers; State space model, State transition matrix.	15	25	45 mins	
EE_P05	Signals and Systems-1: Representation of continuous and discrete-time signals, Shifting and scaling operations, Linear Time Invariant and Causal systems, Fourier series representation of continuous periodic signals, Applications	15	25	45 mins	
EE_P06	Signals and Systems-2: Sampling theorem, Laplace Transform and z-Transform.	15	25	45 mins	
EE_P07	Analog Electronics-1: Characteristics of diodes, BJT, MOSFET; Simple diode circuits: clipping, clamping, rectifiers; Amplifiers: Biasing, Equivalent circuit and Frequency response Digital Electronics-1: Combinational and Sequential logic circuits, Multiplexer, Demultiplexer, Schmitt trigger	15	25	45 mins	
EE_P08	Analog Electronics-2: Oscillators and Feedback amplifiers; Operational amplifiers: Characteristics and applications; Simple active filters, VCOs and Timers Digital Electronics-2: Sample and hold circuits, A/D and D/A converters, 8085 Microprocessor: Architecture, Programming and Interfacing.	15	25	45 mins	
EE_P09	Electrical Circuits-1: KCL, KVL, Node and Mesh analysis, Ideal current and voltage sources, Thevenin's theorem, Norton's theorem, Superposition theorem, Maximum power transfer theorem.	15	25	45 mins	
EE_P10	Electrical Circuits-2: Network graph, Transient response of dc and ac networks, Sinusoidal steady-state analysis, Resonance, Passive filters, Two-port networks, Three phase circuits, Power and power factor in ac circuits.	15	25	45 mins	
EE_P11	Electrical Machines-1: Single phase transformer: equivalent circuit, phasor diagram, open circuit and short circuit tests, regulation and efficiency; Three phase transformers: connections, parallel operation; Auto-transformer.	15	25	45 mins	
EE_P12	Electrical Machines-2: Three phase induction motors: principle of operation, types, performance, torque-speed characteristics, no-load and blocked rotor tests, equivalent circuit, starting and speed control; Operating principle of single phase induction motors.	15	25	45 mins	
EE_P13	Electrical Machines-3: Electromechanical energy conversion principles, DC machines: separately excited, series and shunt, motoring and generating mode of operation and their characteristics, starting and speed control of dc motors.	15	25	45 mins	
EE_P14	Electrical Machines-4: Synchronous machines: cylindrical and salient pole machines, performance, regulation and parallel operation of generators, starting of synchronous motor, characteristics; Types of losses and efficiency calculations of electric machines.	15	25	45 mins	

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
EE_P15	Power Systems-1: Power generation concepts, Per-unit quantities, Bus admittance matrix, Gauss-Seidel and Newton-Raphson load flow methods, Voltage and Frequency control, Symmetrical components, Symmetrical and unsymmetrical fault analysis.	15	25	45 mins	20-04-2020
EE_P16	Power Systems-2: System stability concepts, Equal area criterion, Models and performance of transmission lines and cables, Series and shunt compensation, Power factor correction.	15	25	45 mins	
EE_P17	Power Systems-3: Electric field distribution and insulators, Distribution systems, ac and dc transmission concepts, Principles of over-current, differential and distance protection; Circuit breakers	15	25	45 mins	
EE_P18	Power Electronics-1: Characteristics of semiconductor power devices: Diode, Thyristor, Triac, GTO, MOSFET, IGBT; Single and three phase configuration of uncontrolled rectifiers, Line commutated thyristor based converters, Issues of line current harmonics, Power factor, Distortion factor of ac to dc converters.	15	25	45 mins	
EE_P19	Power Electronics-2: DC to DC conversion: Buck, Boost and Buck-Boost converters; Bidirectional ac to dc voltage source converters, Single phase and three phase inverters, Sinusoidal pulse width modulation.	15	25	45 mins	
EE_P20	Measurements-1: Bridges and Potentiometers, Measurement of voltage, current, power, energy and power factor; Instrument transformers, Error analysis.	15	25	45 mins	
EE_P21	Measurements-2: Digital voltmeters and multimeters, Phase, Time and Frequency measurement; Oscilloscopes	15	25	45 mins	
EE_P22	Electromagnetic Fields-1: 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	15	25	45 mins	
EE_P23	Electromagnetic Fields-2: Biot-Savart's law, Ampere's law, Curl, Faraday's law, Lorentz force, Inductance, Magnetomotive force, Reluctance, Magnetic circuits, Self and Mutual inductance of simple configurations.	15	25	45 mins	
EE_P24	Verbal Ability: English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction.	15	25	45 mins	
EE_P25	Numerical Ability: Numerical computation, numerical estimation, numerical reasoning and data interpretation.	15	25	45 mins	

Subject Wise Grand Tests

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
EE_P26	Engineering Mathematics	30	50	90 mins	20-04-2020
EE_P27	Control systems	30	50	90 mins	
EE_P28	Signals & Systems	30	50	90 mins	
EE_P29	Digital Electronics	30	50	90 mins	
EE_P30	Electrical Circuits	30	50	90 mins	
EE_P31	Electrical Machines	30	50	90 mins	
EE_P32	Analog Electronics	30	50	90 mins	
EE_P33	Power Systems	30	50	90 mins	
EE_P34	Measurements	30	50	90 mins	
EE_P35	Electromagnetic Fields	30	50	90 mins	
EE_P36	Power Electronics	30	50	90 mins	
EE_P37	General Aptitude	30	50	90 mins	

Multi-Subject Wise Grand Tests

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
EE_P38	Electrical Circuits & Electromagnetic Fields	30	50	90 mins	20-04-2020
EE_P39	Control systems & Signals & Systems	30	50	90 mins	
EE_P40	Power Electronics & Analog Electronics	30	50	90 mins	
EE_P41	Electrical Machines & Digital Electronics	30	50	90 mins	
EE_P42	Measurements & Power Systems	30	50	90 mins	
EE_P43	Engineering Mathematics & General Aptitude	30	50	90 mins	

Full Length Mock GATE Tests

Test No	Name of the Topic	No. of Questions	Max Marks	Duration	Date of Activation
EE_P44	Full Length GATE Mock Test-1	65	100	180 mins	20-04-2020
EE_P45	Full Length GATE Mock Test-2	65	100	180 mins	
EE_P46	Full Length GATE Mock Test-3	65	100	180 mins	
EE_P47	Full Length GATE Mock Test-4	65	100	180 mins	
EE_P48	Full Length GATE Mock Test-5	65	100	180 mins	
EE_P49	Full Length GATE Mock Test-6	65	100	180 mins	
EE_P50	Full Length GATE Mock Test-7	65	100	180 mins	
EE_P51	Full Length GATE Mock Test-8	65	100	180 mins	
EE_P52	Full Length GATE Mock Test-9	65	100	180 mins	
EE_P53	Full Length GATE Mock Test-10	65	100	180 mins	
EE_P54	Full Length GATE Mock Test-11	65	100	180 mins	
EE_P55	Full Length GATE Mock Test-12	65	100	180 mins	