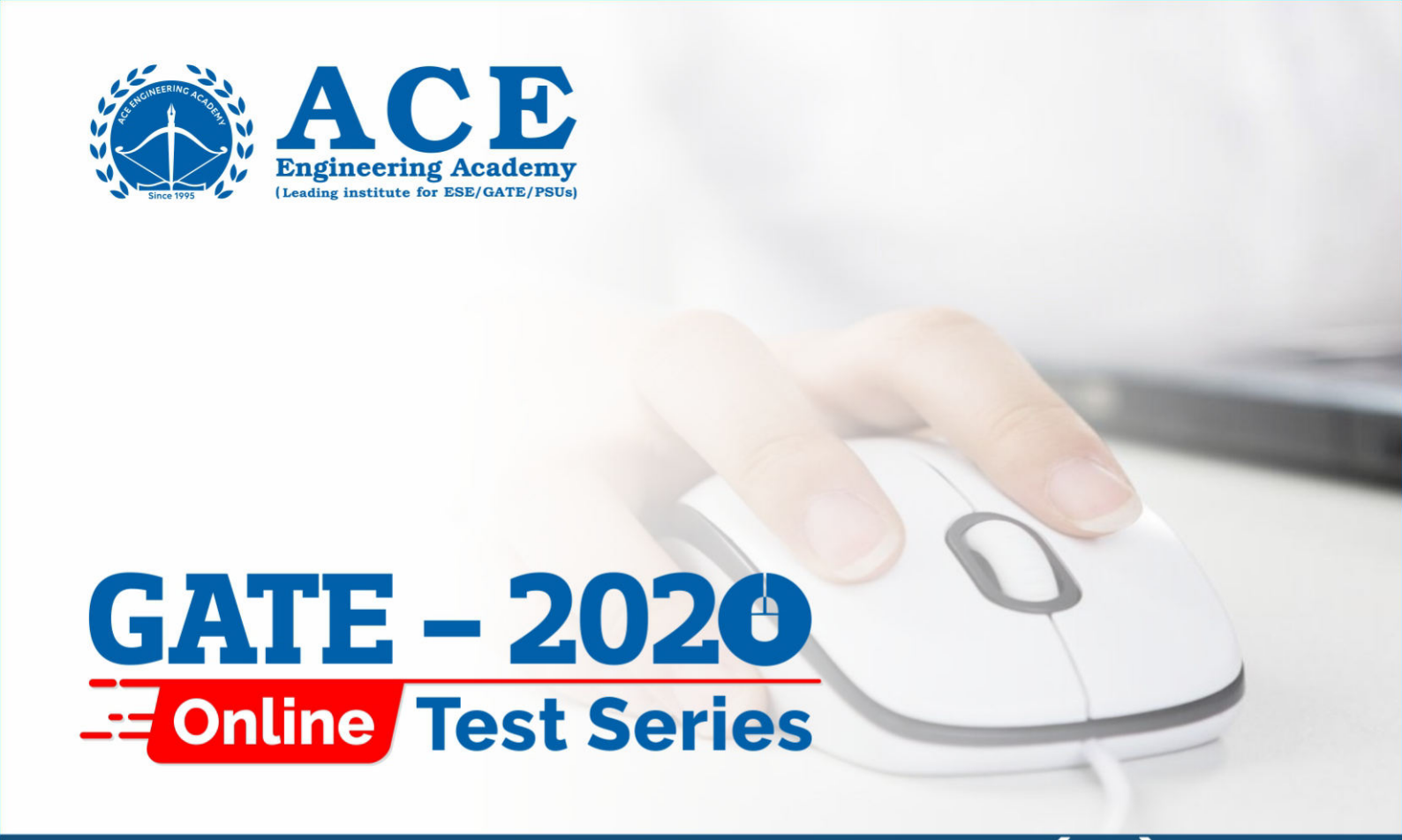
ACE Engineering Academy
(Leading institute for ESE/GATE/PSUs)



GATE – 2020
Online Test Series

ELECTRICAL ENGINEERING (EE)

No. of Tests : 67 + Free 52 Practice Tests of GATE - 2019 Online Test Series

	GATE - 2020 Test Series	Practice Tests GATE - 2019 Test Series
Topic wise Tests	25	22
Subject Wise / Multi Subject Grand Tests	30	18
Full Length Mock Tests	12	12

All tests will be available till GATE -2020 Examination.

TEST SERIES HIGHLIGHTS

- ★ All India Rank will be given for each test.
- ★ Test wise and overall statistics.
- ★ Comparison with toppers.
- ★ Question wise and test wise time analysis & comparison with toppers on time management.

Topic wise Tests

Each test carries 25 marks and 45 minutes duration

Test consists of 5 one mark questions and 10 two marks questions

Tests will be activated at 2:00 pm on scheduled day

Test No	Topic code	Topic	Date of Activation
EE-01	GEM–1 (Engineering Mathematics)	Linear Algebra, Calculus, Differential Equations.	02-05-2019
EE-02	GEM–2 (Engineering Mathematics)	Complex Variables, Numerical Methods, Probability and Statistics & Transfrom Theory.	
EE-03	GCS – 1 (Control systems)	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	
EE-04	GCS – 2 (Control systems)	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.	
EE-05	GSS-1 (Signals & 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, Applications of Fourier Transform,	08-05-2019
EE-06	GSS – 2 (Signals & Systems)	Sampling theorem, Laplace Transform and z-Transform.	
EE-07	GAE-1 (Analog Electronics) GDE-1 (Digital Electronics)	**GAE-1 :** Characteristics of diodes, BJT, MOSFET; Simple diode circuits: clipping, clamping, rectifiers; Amplifiers: Biasing, Equivalent circuit and Frequency response **GDE-1:** Combinational and Sequential logic circuits, Multiplexer, Demultiplexer, Schmitt trigger	
EE-08	GAE-2 (Analog Electronics) GDE-2 (Digital Electronics)	**GAE-2:** Oscillators and Feedback amplifiers; Operational amplifiers: Characteristics and applications; Simple active filters, VCOs and Timers **GDE-2:** Sample and hold circuits, A/D and D/A converters, 8085 Microprocessor: Architecture, Programming and Interfacing.	
EE-09	GEC-1 (Electrical Circuits)	KCL, KVL, Node and Mesh analysis, Ideal current and voltage sources, Thevenin's theorem, Norton's theorem, Superposition theorem, Maximum power transfer theorem.	15-05-2019
EE-10	GEC -2 (Electrical Circuits)	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.	
EE-11	GMC-1 (Electrical Machines)	Single phase transformer: equivalent circuit, phasor diagram, open circuit and short circuit tests, regulation and efficiency; Three phase transformers: connections, parallel operation; Auto-transformer.	
EE-12	GMC-2 (Electrical Machines)	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.	
EE-13	GMC-3 (Electrical Machines)	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.	
EE-14	GMC-4 (Electrical Machines)	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.	

Test No	Topic code	Topic	Date of Activation
EE-15	GPS-1 (Power Systems)	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.	22-05-2019
EE-16	GPS-2 (Power Systems)	System stability concepts, Equal area criterion, Models and performance of transmission lines and cables, Series and shunt compensation, Power factor correction.	
EE-16	GPS-3 (Power Systems)	Electric field distribution and insulators, Distribution systems, ac and dc transmission concepts,Principles of over-current, differential and distance protection; Circuit breakers	
EE-18	GPE – 1 (Power Electronics)	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.	
EE-19	GPE – 2 (Power Electronics)	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.	
EE-20	GME-1 (Measurements)	Bridges and Potentiometers, Measurement of voltage, current, power, energy and power factor; Instrument transformers,Error analysis.	29-05-2019
EE-21	GME-2 (Measurements)	Digital voltmeters and multimeters, Phase, Time and Frequency measurement; Oscilloscopes	
EE-22	GEF-1 (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	
EE-23	GEF-2 (Electromagnetic Fields)	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.	
EE-24	GGA-1 (General Aptitude)	English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction.	
EE-25	GGA-2 (General Aptitude)	Numerical computation, numerical estimation, numerical reasoning and data interpretation.	

Subject-wise Grand Tests 1st Series

Each test carries 50 marks and 90 minutes duration

Test consists of 10 one mark questions and 20 two marks questions

Test No	Subject Code	Name of the Subject	Date of Activation
EE-26	GEM	Engineering Mathematics	05-06-2019
EE-27	GCS	Control systems	
EE-28	GSS	Signals & Systems	12-06-2019
EE-29	GDE	Digital Electronics	
EE-30	GEC	Electrical Circuits	19-06-2019
EE-31	GMC	Electrical Machines	
EE-32	GAE	Analog Electronics	26-06-2019
EE-33	GPS	Power Systems	
EE-34	GME	Measurements	03-07-2019
EE-35	GEF	Electromagnetic Fields	
EE-36	GPE	Power Electronics	06-07-2019
EE-37	GGA	General Aptitude	

Full Length Mock GATE - 1st Series

As per GATE pattern

Each test carries 100 Marks and 3 Hours duration

Test No	Mock Codes		Date of Activation
EE-38	Mock-1	Full Length GATE Mock Test-1	10-07-2019
EE-39	Mock-2	Full Length GATE Mock Test-2	17-07-2019
EE-40	Mock-3	Full Length GATE Mock Test-3	24-07-2019

Subject-wise Grand Tests - 2nd Series

Each test carries 50 marks and 90 minutes duration

Test No	Subject Code	Name of the Subject	Date of Activation
EE-41	GEM	Engineering Mathematics	07-08-2019
EE-42	GCS	Control systems	
EE-43	GSS	Signals & Systems	14-08-2019
EE-44	GDE	Digital Electronics	
EE-45	GEC	Electrical Circuits	21-08-2019
EE-46	GMC	Electrical Machines	
EE-47	GAE	Analog Electronics	28-0-2019
EE-48	GPS	Power Systems	
EE-49	GME	Measurements	04-09-2019
EE-50	GEF	Electromagnetic Fields	
EE-51	GPE	Power Electronics	07-09-2019
EE-52	GGA	General Aptitude	

Full Length Mock GATE - 2nd Series (As per GATE pattern)

Test No	Mock Codes		Date of Activation
EE-53	Mock-4	Full Length GATE Mock Test-4	11-09-2019
EE-54	Mock-5	Full Length GATE Mock Test-5	18-09-2019
EE-55	Mock-6	Full Length GATE Mock Test-6	25-09-2019

Multi-Subject wise Grand Tests

Each test carries 50 marks and 90 minutes duration

Test No	Subject Code	Name of the Subject	Date of Activation
EE-56	GEC & GEF	Electrical Circuits & Electromagnetic Fields	02-10-2019
EE-57	GCS & GSS	Control systems & Signals & Systems	
EE-58	GPE & GAE	Power Electronics & AnalogElectronics	16-10-2019
EE-59	GMC & GDE	Electrical Machines & Digital Electronics	
EE-60	GME & GPS	Measurements & Power Systems	23-10-2019
EE-61	GEM & GGA	Engineering Mathematics & General Aptitude	

Full Length Mock GATE - 3rd Series (As per GATE pattern)			
Test No	**Mock Codes**		**Date of Activation**
EE-62	Mock-7	Full Length GATE Mock Test-7	06-11-2019
EE-63	Mock-8	Full Length GATE Mock Test-8	13-11-2019
EE-64	Mock-9	Full Length GATE Mock Test-9	20-11-2019
EE-65	Mock-10	Full Length GATE Mock Test-10	07-01-2020
EE-66	Mock-11	Full Length GATE Mock Test-11	17-01-2020
EE-67	Mock-12	Full Length GATE Mock Test-12	24-01-2020

Free Practice Tests of GATE-2019 Online Test Series

Topic wise Tests

Each test carries 25 marks and 45 minutes duration

Test No	Topic code	Topic	Date of Activation
EE-P01	GEM–1 (Engineering Mathematics)	Linear Algebra, Calculus, Differential Equations.	02-05-2019
EE-P02	GEM–2 (Engineering Mathematics)	Complex Variables, Numerical Methods, Probability and Statistics & Transfrom Theory.	
EE-P03	GCS – 1 (Control systems)	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	
EE-P04	GCS – 2 (Control systems)	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.	
EE-P05	GSS-1 (Signals & 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, Applications of Fourier Transform	
EE-P06	GSS – 2 (Signals & Systems)	Sampling theorem, Laplace Transform and z-Transform.	
EE-P07	GAE-1 (Analog Electronics) GDE-1 (Digital Electronics)	**GAE-1 :** Characteristics of diodes, BJT, MOSFET; Simple diode circuits: clipping, clamping, rectifiers; Amplifiers: Biasing, Equivalent circuit and Frequency response **GDE-1:** Combinational and Sequential logic circuits, Multiplexer, Demultiplexer, Schmitt trigger	
EE-P08	GAE-2 (Analog Electronics) GDE-2 (Digital Electronics)	**GAE-2:** Oscillators and Feedback amplifiers; Operational amplifiers: Characteristics and applications; Simple active filters, VCOs and Timers **GDE-2:** Sample and hold circuits, A/D and D/A converters, 8085 Microprocessor: Architecture, Programming and Interfacing.	

Test No	Topic code	Topic	Date of Activation
EE-P09	GEC-1 (Electrical Circuits)	KCL, KVL, Node and Mesh analysis, Ideal current and voltage sources, Thevenin's theorem, Norton's theorem, Superposition theorem, Maximum power transfer theorem.	02-05-2019
EE-P10	GEC -2 (Electrical Circuits)	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.	
EE-P11	GMC-1 (Electrical Machines)	Single phase transformer: equivalent circuit, phasor diagram, open circuit and short circuit tests, regulation and efficiency; Three phase transformers: connections, parallel operation; Auto-transformer, 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.	
EE-P12	GMC-2 (Electrical Machines)	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. 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.	
EE-P13	GPS-1 (Power Systems)	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, System stability concepts, Equal area criterion	
EE-P14	GPS-2 (Power Systems)	Models and performance of transmission lines and cables, Series and shunt compensation, Power factor correction, Electric field distribution and insulators, Distribution systems, ac and dc transmission concepts,Principles of over-current, differential and distance protection; Circuit breakers	
EE-P15	GPE – 1 (Power Electronics)	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.	
EE-P16	GPE – 2 (Power Electronics)	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.	
EE-P17	GME-1 (Measurements)	Bridges and Potentiometers, Measurement of voltage, current, power, energy and power factor; Instrument transformers,Error analysis.	
EE-P18	GME-2 (Measurements)	Digital voltmeters and multimeters, Phase, Time and Frequency measurement; Oscilloscopes	
EE-P19	GEF-1 (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	
EE-P20	GEF-2 (Electromagnetic Fields)	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.	
EE-P21	GGA-1 (General Aptitude)	English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction.	
EE-P22	GGA-2 (General Aptitude)	Numerical computation, numerical estimation, numerical reasoning and data interpretation.	

Subject-wise Grand Tests

Each test carries 50 marks and 90 minutes duration

Test No	Subject Code	Name of the Subject	Date of Activation
EE-P23	GEM	Engineering Mathematics	02-05-2019
EE-P24	GCS	Control systems	
EE-P25	GSS	Signals & Systems	
EE-P26	GDE	Digital Electronics	
EE-P27	GEC	Electrical Circuits	
EE-P28	GMC	Electrical Machines	
EE-P29	GAE	Analog Electronics	
EE-P30	GPS	Power Systems	
EE-P31	GME	Measurements	
EE-P32	GEF	Electromagnetic Fields	
EE-P33	GPE	Power Electronics	
EE-P34	GGA	General Aptitude	

Multi-Subject wise Grand Tests

Each test carries 50 marks and 90 minutes duration

Test No	Subject Code	Name of the Subject	Date of Activation
EE-P35	GEC & GEF	Electrical Circuits & Electromagnetic Fields	02-05-2019
EE-P36	GCS & GSS	Control systems & Signals & Systems	
EE-P37	GPE & GAE	Power Electronics & AnalogElectronics	
EE-P38	GMC & GDE	Electrical Machines & Digital Electronics	
EE-P39	GME & GPS	Measurements & Power Systems	
EE-P40	GEM & GGA	Engineering Mathematics & General Aptitude	

Full Length Mock GATE(As per GATE pattern)

Test No	Mock Codes		Date of Activation
EE-P41	Mock-1	Full Length GATE Mock Test-1	25-05-2019
EE-P42	Mock-2	Full Length GATE Mock Test-2	
EE-P43	Mock-3	Full Length GATE Mock Test-3	
EE-P44	Mock-4	Full Length GATE Mock Test-4	
EE-P45	Mock-5	Full Length GATE Mock Test-5	
EE-P46	Mock-6	Full Length GATE Mock Test-6	
EE-P47	Mock-7	Full Length GATE Mock Test-7	
EE-P48	Mock-8	Full Length GATE Mock Test-8	
EE-P49	Mock-9	Full Length GATE Mock Test-9	
EE-P50	Mock-10	Full Length GATE Mock Test-10	
EE-P51	Mock-11	Full Length GATE Mock Test-11	
EE-P52	Mock-12	Full Length GATE Mock Test-12	