



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

GATE - 2019

Online Test Series

ELECTRONICS & COMMUNICATION ENGINEERING (EC)

No. of Tests : 64 + *Free* 22 Practice Tests of GATE - 2018 Online Test Series

	GATE - 19 Test Series	Practice Tests GATE - 18 Test Series
 Topic wise Tests	22	-
 Subject Wise / Multi Subject Grand Tests	30	10
 Full Length Mock Tests	12	12

All tests will be available till GATE -2019 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
EC-01	GEM – 1 (Engineering Mathematics)	Linear Algebra, Calculus, Differential Equations and Vector Analysis.	02-05-2018
EC-02	GEM – 2 (Engineering Mathematics)	Complex Analysis, Numerical Methods and Probability and Statistics.	
EC-03	GCS – 1 (Control Systems)	Basic control system components; Feedback principle; Transfer function; Block diagram representation; Signal flow graph; Transient and steady-state analysis of LTI systems; Routh – Hurwitz stability criteria, root-locus plot.	
EC-04	GCS – 2 (Control Systems)	Frequency response; Nyquist stability criteria; Bode Plot, Lag, lead and lag-lead compensation; State variable model and solution of state equation of LTI systems.	
EC-05	GSS – 1 (Signals and Systems)	Introduction to signals, LTI systems: definition and properties, causality, stability, impulse response, convolution. Fourier series and Fourier transform representations. sampling theorem and applications. Frequency response, group delay and phase delay.	09-05-2018
EC-06	GSS – 2 (Signals and Systems)	Laplace transform, discrete-time Fourier transform (DTFT), DFT, FFT, Z-transform, interpolation of discrete-time signals, poles and zeros, parallel and cascade structure, digital filter design techniques.	
EC-07	GDC – 1 (Digital Circuits)	Number systems; Combinatorial circuits: Boolean algebra, minimization of functions using Boolean identities and Karnaugh map, logic gates and their static CMOS implementations, arithmetic circuits, code converters, multiplexers, decoders and PLAs;	
EC-08	GDC – 2 (Digital Circuits)	Sequential circuits: latches and flip-flops, counters, shift-registers and finite state machines. Data converters: sample and hold circuits, ADCs and DACs;	
EC-09	GDC – 3 (Digital Circuits)	Semiconductor memories: ROM, SRAM, DRAM, 8-bit microprocessor (8085): architecture, programming, memory and I/O interfacing.	16-05-2018
EC-10	GNW – 1 (Networks)	Network solution methods: nodal and mesh analysis; Network theorems: superposition, Thevenin and Norton's, maximum power transfer; Wye-Delta transformation	
EC-11	GNW – 2 (Networks)	Steady state sinusoidal analysis using phasors; Time domain analysis of simple linear circuits; Solution of network equations using Laplace transform; Frequency domain analysis of RLC circuits; Linear 2-port network parameters: driving point and transfer functions; State equations for networks.	
EC-12	GEDC – 1 (Electronic Devices)	Energy bands in intrinsic and extrinsic silicon; Carrier transport: diffusion current, drift current, mobility and resistivity; Generation and recombination of carriers; Poisson and continuity equations; P-N junction, Zener diode, BJT.	23-05-2018
EC-13	GEDC – 2 (Electronic Devices)	MOS capacitor, MOSFET, LED, photo diode and solar cell; Integrated circuit fabrication process: oxidation, diffusion, ion implantation, photolithography and twin-tub CMOS process.	
EC-14	GAC – 1 (Analog Circuits)	Small signal equivalent circuits of diodes, BJTs and MOSFETs; Simple diode circuits: clipping, clamping and rectifiers; Single-stage BJT and MOSFET amplifiers: biasing, bias stability, mid-frequency small signal analysis and frequency response; BJT and MOSFET amplifiers: multi-stage.	23-05-2018
EC-15	GAC – 2 (Analog Circuits)	Differential, feedback, power and operational; Simple op-amp circuits; Active filters; Sinusoidal oscillators: criterion for oscillation, single-transistor and op- amp configurations; Function generators, wave-shaping circuits and 555 timers; Voltage reference circuits; Power supplies: ripple removal and regulation.	

Test No	Topic code	Topic	Date of Activation
EC-16	GCMS – 1 (Communications)	Analog communications: amplitude modulation and demodulation, angle modulation and demodulation, spectra of AM and FM, superheterodyne receivers, circuits for analog communications.	23-05-2018
EC-17	GCMS – 2 (Communications)	Random processes: autocorrelation and power spectral density, properties of white noise, filtering of random signals through LTI systems; ; Information theory: entropy, mutual information and channel capacity theorem.	
EC-18	GCMS – 3 (Communications)	Digital communications: PCM, DPCM, digital modulation schemes, amplitude, phase and frequency shift keying (ASK, PSK, FSK), QAM, MAP and ML decoding, matched filter receiver, calculation of bandwidth, SNR and BER for digital modulation; Fundamentals of error correction, Hamming codes; Timing and frequency synchronization, inter-symbol interference and its mitigation; Basics of TDMA, FDMA and CDMA.	
EC-19	GEMT – 1 (Electromagnetics)	Electrostatics; Maxwell's equations: differential and integral forms and their interpretation, boundary conditions, wave equation, Poynting vector; Plane waves and properties: reflection and refraction, polarization, phase and group velocity, propagation through various media, skin depth.	30-05-2018
EC-20	GEMT – 2 (Electromagnetics)	Transmission lines: equations, characteristic impedance, impedance matching, impedance transformation, S-parameters, Smith chart; Waveguides: modes, boundary conditions, cut-off frequencies, dispersion relations; Antennas: antenna types, radiation pattern, gain and directivity, return loss, antenna arrays; Basics of radar; Light propagation in optical fibers.	
EC-21	GVA (General Aptitude)	English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction.	
EC-22	GNA (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
EC-23	GEM	Engineering Mathematics	06-06-2018
EC-24	GCS	Control Systems	
EC-25	GSS	Signals and Systems	13-06-2018
EC-26	GDC	Digital Circuits	
EC-27	GNW	Networks	20-06-2018
EC-28	GEDC	Electronic Devices	
EC-29	GAC	Analog Circuits	27-06-2018
EC-30	GCMS	Communications	
EC-31	GEMT	Electromagnetics	04-07-2018
EC-32	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
EC-33	Mock-1	Full Length GATE Mock Test-1	11-07-2018
EC-34	Mock-2	Full Length GATE Mock Test-2	18-07-2018
EC-35	Mock-3	Full Length GATE Mock Test-3	25-07-2018

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
EC-36	GEM	Engineering Mathematics	08-08-2018
EC-37	GCS	Control Systems	
EC-38	GSS	Signals and Systems	15-08-2018
EC-39	GDC	Digital Circuits	
EC-40	GNW	Networks	22-08-2018
EC-41	GEDC	Electronic Devices	
EC-42	GAC	Analog Circuits	29-08-2018
EC-43	GCMS	Communications	
EC-44	GEMT	Electromagnetics	05-09-2018
EC-45	GGA	General Aptitude	

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

Test No	Mock codes		Date of Activation
EC-46	Mock-4	Full Length GATE Mock Test-4	11-09-2018
EC-47	Mock-5	Full Length GATE Mock Test-5	18-09-2018
EC-48	Mock-6	Full Length GATE Mock Test-6	25-09-2018

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
EC-49	GNW & GEMT	Networks & Electromagnetics	03-10-2018
EC-50	GCS & GSS	Control Systems & Signals and Systems	
EC-51	GEDC & GAC	Electronic Devices & Analog Circuits	10-10-2018
EC-52	GCMS & GDC	Communications & Digital Circuits	
EC-53	GEM & GGA	Engineering Mathematics & General Aptitude	24-10-2018
EC-54	GCS, GSS, DC, AC	Control Systems, Signals and Systems, Digital Circuits & Analog Circuits	
EC-55	GEDC, NW, CMS, EMT	Electronic Devices, Networks, Communications & Electromagnetics	31-10-2018
EC-56	GSS, AC, EDC, CMS	Signals and Systems, Analog Circuits, Electronic Devices & Communications	
EC-57	GCS, NW, DC, EMT	Control Systems, Networks, Digital Circuits & Electromagnetics	02-11-2018
EC-58	GEM & GGA	Engineering Mathematics & General Aptitude	

Full Length Mock GATE - 3rd Series (As per GATE pattern)

Test No	Mock codes		Date of Activation
EC-59	Mock-7	Full Length GATE Mock Test-7	08-11-2018
EC-60	Mock-8	Full Length GATE Mock Test-8	15-11-2018
EC-61	Mock-9	Full Length GATE Mock Test-9	22-11-2018
EC-62	Mock-10	Full Length GATE Mock Test-10	07-01-2019
EC-63	Mock-11	Full Length GATE Mock Test-11	17-01-2019
EC-64	Mock-12	Full Length GATE Mock Test-12	27-01-2019

Free Practice Tests of GATE-2018 Online Test Series**Subject-wise Grand Tests**

Each test carries 50 marks and 90 minutes duration

Test No	Subject Code	Name of the Subject	Date of Activation
EC-P1	GNW	Networks	02-05-2018
EC-P2	GSS	Signals and Systems	
EC-P3	GCS	Control Systems	
EC-P4	GDC	Digital Circuits	
EC-P5	GEDC	Electronic Devices	
EC-P6	GAC	Analog Circuits	
EC-P7	GCMS	Communications	
EC-P8	GEMT	Electromagnetics	
EC-P9	GEM	Engineering Mathematics	
EC-P10	GGA	General Aptitude	

Full Length Mock GATE(As per GATE pattern)

Test No	Mock codes		Date of Activation
EC-P11	Mock-1	Full Length GATE Mock Test-1	25-05-2018
EC-P12	Mock-2	Full Length GATE Mock Test-2	
EC-P13	Mock-3	Full Length GATE Mock Test-3	
EC-P14	Mock-4	Full Length GATE Mock Test-4	
EC-P15	Mock-5	Full Length GATE Mock Test-5	
EC-P16	Mock-6	Full Length GATE Mock Test-6	
EC-P17	Mock-7	Full Length GATE Mock Test-7	
EC-P18	Mock-8	Full Length GATE Mock Test-8	
EC-P19	Mock-9	Full Length GATE Mock Test-9	
EC-P20	Mock-10	Full Length GATE Mock Test-10	
EC-P21	Mock-11	Full Length GATE Mock Test-11	
EC-P22	Mock-12	Full Length GATE Mock Test-12	