

## GATE 2018 Online Test Series - Electrical & Electronics Engineering

Test No	Type of test	Test Live from	Test details	Test Syllabus	Difficulty level	No of questions	Max Marks	Test duration
1			Engineering Mathematics-I	Linear Algebra, Probability, Statistics	Easy	20	40	60 min
2			Engineering Mathematics-II	Complex Analysis, Laplace Transforms, Differential equations	Easy	20	40	60 min
3			Engineering Mathematics-III	Numerical Methods, Vector Calculus, Calculus, Integral Calculus	Easy	20	40	60 min
4			Electrical Materials- I	Bonding in Solids, Crystallography and crystal structures, Basics of Solid state physics, conductors, photo-conductivity	Easy	20	40	60 min
5			Electrical Materials- II	Dielectric and Magnetic Properties	Easy	20	40	60 min
6			Electrical Materials- III	Conductive Materials, Superconductivity, Ceramic materials and Nano Materials	Easy	20	40	60 min
7			Electrical Circuits-I	Fundamentals	Easy	20	40	60 min
8			Electrical Circuits-II	DC Network Theorems & Two Port Networks	Easy	20	40	60 min
9			Electrical Circuits-III	Inductors & Capacitors, DC Transients	Easy	20	40	60 min
10			Electrical Circuits-IV	AC Circuits, Graph theory, 3-phase circuits, Magnetically Coupled Circuits	Easy	20	40	60 min
11			Electromagnetic fields-I	Electrostatics, Magnetostatics, Maxwell Equations	Easy	20	40	60 min
12			Electrical & Electronic Measurements-I	Bridges & Potentiometers, Measurement of Voltage, Current	Easy	20	40	60 min
13			Electrical & Electronic Measurements-II	Measurement of Power, Energy & Power factor; Instrument Transformers, Digital Voltmeters & Multimeters	Easy	20	40	60 min
14			Electrical & Electronic Measurements-III	Phase, Time & Frequency Measurement; Oscilloscopes, Error Analysis	Easy	20	40	60 min
15			Electrical & Electronic Measurements-IV	Q-Meters, Basics of Sensors, Transducers, Basics of Data Acquisition Systems	Easy	20	40	60 min
16			Computer Fundamentals-I	Number System, Boolean Algebra, Logic Gates, KMAP	Easy	20	40	60 min
17			Computer Fundamentals-II	Basic architecture, Central processing unit, I/O and memory organisation; Peripheral devices, data representation and programming, Basics of operating system and networking, Virtual memory, File systems; Elements of programming languages, typical examples.	Easy	20	40	60 min
18			Basic Electronics Engineering -I	Basics of semiconductor diodes and transistors and characteristics, Junction and field effect transistors (BJT, FET and MOSFETs)	Easy	20	40	60 min
19			Basic Electronics Engineering -II	Different types of Transistor amplifiers, Equivalent circuits and Frequency response; Oscillators and other circuits	Easy	20	40	60 min
20			Analog and Digital Electronics-I	Op-amp characteristics and applications, Feedback amplifier, Basics of filter circuits and applications, Simple active filters; Basics of Linear Integrated Circuits	Easy	20	40	60 min
21			Analog and Digital Electronics-II	Combinational and Sequential circuits	Easy	20	40	60 min
22			Analog and Digital Electronics-III	Multi-Vibrators, Data converters, Micro processor	Easy	20	40	60 min
23			Analog and Digital Electronics-IV	Analog communication basics, Modulation and Demodulation, Noise and Bandwidth, Transmitters and Receivers, Signal to noise ratio, Digital communication basics, Sampling, Quantizing, Coding, Frequency and Time Domain Multiplexing, Power Line Carrier Communication systems.	Easy	20	40	60 min
24			Systems & Signal processing - I	Fundamentals, Classification of Continuous time & Discrete time, LTI systems, Application of signals and systems, System realization	Easy	20	40	60 min
25			Systems & Signal processing - II	Transforms and their applications (Fourier Series, Fourier Transforms, Laplace, Z- Transforms)	Easy	20	40	60 min

26	Section Test - Partial Syllabus	7th June 2017 Onwards	Systems & Signal processing - III	DTFT, Digital Filters, DFT & FFT, Sampling, Discrete cosine Transform, Bilinear Transformation	Easy	20	40	60 min
27			Control Systems-I	Fundamentals, Block diagram, Signal flow graph	Easy	20	40	60 min
28			Control Systems-II	Time Response Analysis	Easy	20	40	60 min
29			Control Systems-III	Frequency Response Analysis	Easy	20	40	60 min
30			Control Systems-IV	State Space Analysis, Controllability, Observability, PID & Industrial Controllers	Easy	20	40	60 min
31			Electrical Machines-I	Transformers	Easy	20	40	60 min
32			Electrical Machines-II	DC Machines	Easy	20	40	60 min
33			Electrical Machines-III	Induction Machines	Easy	20	40	60 min
34			Electrical Machines-IV	Synchronous machines, Special machines	Easy	20	40	60 min
35			Power Systems-I	Power Generation Transmission concepts (Hydel,Thermal,Nuclear), Solar ,Wind and Gas stations	Easy	20	40	60 min
36			Power Systems-II	Insulators, Distribution systems, Voltage and Frequency control, Power factor correction, Economic operation of power systems, Corona	Easy	20	40	60 min
37			Power Systems-III	Per-unit quantities, Load flow analysis, Fault analysis	Easy	20	40	60 min
38			Power Systems-IV	Switch gear and protection, System Stability Concepts, Equal Area Criterion	Easy	20	40	60 min
39			Power Systems-V	HVDC transmission, FACTS concepts, Smart grid concepts, Environmental implications of power generation	Easy	20	40	60 min
40			Power Electronics and Drives-I	Power Semiconductor Devices, Phase Controlled Rectifiers	Easy	20	40	60 min
41			Power Electronics and Drives-II	Single Phase and Three Phase Inverters, Sinusoidal Pulse Width Modulation.	Easy	20	40	60 min
42			Power Electronics and Drives-III	DC to DC Conversion: buck, boost and buck-boost converters	Easy	20	40	60 min
43			Power Electronics and Drives-IV	DC-DC switched mode converters, DC-AC switched mode converters, resonant converters, high frequency inductors and transformers, power supplies	Easy	20	40	60 min
44			GS-1	General Principles of Design, Drawing, Importance of Safety, Basics of Project Management	Easy	20	40	60 min

45			GS-2	Standards and Quality practices in production, construction, maintenance and services, Basics of Energy and Environment	Easy	20	40	60 min
46			GS-3	Basics of Material Science and Engineering, Ethics and values in Engineering profession	Easy	20	40	60 min
47			GS-4	General Aptitude, Numerical Analysis and Engineering Mathematics	Easy	20	40	60 min
48			GS-5	Current issues of national and international importance, Information and Communication Technologies (ICT) based tools and their applications in Engineering	Easy	20	40	60 min
MT-1	Mock Tests	15th Nov'17	Paper -1	General Studies- Full Syllabus	Moderate	100	200	120 min
			Paper-2	Core Engg Full Syllabus		150	300	180 min
MT-1		29th Nov'17	Paper -1	General Studies- Full Syllabus	Moderate	100	200	120 min
			Paper-2	Core Engg Full Syllabus		150	300	180 min
MT-3		13th Dec'17	Paper -1	General Studies- Full Syllabus	Moderate	100	200	120 min
			Paper-2	Core Engg Full Syllabus		150	300	180 min