

Online Test Series Details for GATE 2025 - 26

Branch : Instrumentation Engineering

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Test Name
Topic Wise Tests Total 23 tests
Subject Wise Tests (Basic Level) Total 10 tests
Subject Wise Test (Advance Level) Total 10 tests
Multiple Subjects Tests Total 12 tests
Full Length Mock GATE Total 10 tests

Topic-wise Tests

Each test carries 30 marks and 45 minutes duration.

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

Topic		Subject
Test 1	Basic Concepts of Network, Network Theorems, Two port Network	Networks Analysis
Test 2	Transient & Steady State Response, Phasor & resonance, Complex Power, Magnetic Coupling & Locus Diagrams	

Topic		Subject
Test 1	Complete analysis of signals and systems, LTI Systems, Convolution, Continuous time Fourier transform and Laplace transform	Signals & Systems
Test 2	Continuous time Fourier Series, Z-Transform, Discrete time Fourier transform, Discrete time Fourier Series, DFT and FFT, Basic of IIR & FIR Filter & Co-relation	

Topic		Subject
Test 1	Linear Algebra, Differential Equation, Limits and Series expansion, Probability, Numerical Methods	Engineering Mathematics
Test 2	Calculus, Integral Calculus, Complex Variable, Statistics	

Topic		Subject
Test 1	Basics of Control Systems, Block Diagram & Signal Flow Graph, Time Response Analysis, Routh Stability Criterion, Root Loci	Control Systems
Test 2	Polar Plot & Nyquist Stability Criterion, Bode Plot, Frequency Response of Second Order System, State Space Analysis, Controllers & Compensators	

Topic		Subject
Test 1	Diode Family (Characteristics Of Diode, Diode Equivalent Circuit, Clipping Clamping & Voltage Regulator Circuits), Small Signal Analysis of Transistor (BJT & MOSFET)	Analog Circuits
Test 2	Operational Amplifier, Feedback Amplifier & Oscillators, Instrumentation Amplifier and PLL, Active Filter, Noise on Electronics Circuit	

Topic		Subject
Test 1	Resistive, capacitive, inductive, piezoelectric, Hall effect sensors and associated signal conditioning circuits; transducers for industrial instrumentation : displacement (linear and angular), velocity, acceleration, force, torque, vibration, shock.	Sensor & Industrial Instrumentation
Test 2	Pressure (including low pressure), flow (differential pressure, variable area, electromagnetic, ultrasonic, turbine and open channel flow meters) temperature (thermocouple, bolometer, RTD (3/4 wire), thermistor, pyrometer and semiconductor); liquid level, pH, conductivity and viscosity measurement.	

Topic		Subject
Test 1	SI units, systematic and random errors in measurement, expression of uncertainty - accuracy and precision index, propagation of errors. PMMC, MI and dynamometer type instruments; dc potentiometer; bridges for measurement of R, L and C.	Measurements
Test 2	Q-meter, Measurement of voltage, current and power in single and three phase circuits; ac and dc current probes; true rms meters, voltage and current scaling, instrument transformers, timer/counter, time, phase and frequency measurements, digital voltmeter, digital multimeter; oscilloscope, shielding and grounding.	

Topic		Subject
Test 1	Amplitude and frequency modulation and demodulation; Shannon's sampling theorem, pulse code modulation; frequency and time division multiplexing, amplitude, phase, frequency, pulse shift keying for digital modulation	Communication and Optical Instrumentation
Test 2	Optical sources and detectors : LED, laser, photo-diode, light Instrumentation dependent resistor and their characteristics; interferometer : applications in metrology; basics of fiber optic sensing.	

Topic		Subject
Test 1	Logic Gates, Boolean Algebra, K-Maps, Number system, Binary Codes & Complement Form, Combinational Circuits.	Digital Circuits
Test 2	Optical sources and detectors : LED, laser, photo-diode, light Instrumentation dependent resistor and their characteristics; interferometer : applications in metrology; basics of fiber optic sensing.	

Topic		Subject
Test 1	Quantitative Aptitude	General Aptitude
Test 2	Verbal Aptitude & Spatial Aptitude	

	Topic	Subject
Test 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.	EMT
Test 2	Biot-Savart's law, Ampere's law, Curl, Faraday's law, Lorentz force, Inductance, Magneto-motive force, Reluctance, Magnetic circuits, Self and Mutual inductance of simple configurations.	

Topic		Subject
Test 1	Equivalent circuit, phasor diagram, open circuit and short circuit tests, regulation and efficiency; Three phase induction motors : principle of operation, types, performance, torque-speed characteristics, no-load and blocked rotor tests, equivalent circuit, starting and speed control; Types of losses and efficiency calculations of electric machines.	Machines

Topic-wise Tests

Each test carries 25 marks and 45 minutes duration.

Test consists of 10 one mark questions and 10 two marks questions (MSQ/MCQ/NAT).

Subjects	No. of Tests
Network Analysis	02
Signals & Systems	02
Control Systems	02
General Aptitude + General English	02
Engineering Mathematics	02
Analog Electronics	02
Sensors and Industrial Instrumentation	02
Digital Electronics	02
Communication and Optical Instrumentation	02
Measurements	02
EMT	02
Machines	01

Basic Level Subject-wise Tests

Each test carries 50 marks and 90 minutes duration.

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

Subjects	No. of Tests
Network Analysis	01
Signals & Systems	01
Control Systems	01
Digital Electronics	01
Engineering Mathematics	01
Analog Electronics	01
Sensors and Industrial Instrumentation	01
General Aptitude + General English	01
Communication and Optical Instrumentation	01
Measurements	01
EMT	01
Machines	01

Advance Level Subject-wise Tests

Each test carries 50 marks and 90 minutes duration.

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

Subjects	No. of Tests
Network Analysis	01
Signals & Systems	01
Control Systems	01
Digital Electronics	01
Engineering Mathematics	01
Analog Electronics	01
Sensors and Industrial Instrumentation	01
General Aptitude + General English	01
Communication and Optical Instrumentation	01
Measurements	01
EMT	01
Machines	01

Combined Subjects Tests (One Year Program)

Each test carries 50 marks and 90 minutes duration.

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

Subjects	No. of Tests
Sensors Transducers + Optical Communication	Moderate Level 1 Advance Level 1
Network Theory + Machines	Moderate Level 1 Advance Level 1
Engineering Mathematics + General Aptitude	Moderate Level 1 Advance Level 1
Signals & Systems + Analog Electronics	Moderate Level 1 Advance Level 1
Digital + Measurement	Moderate Level 1 Advance Level 1
EMT+ Control	Moderate Level 1 Advance Level 1

Full Length Mock GATE (Tentative Details)

(Each test carries 100 marks and 3 hours duration) as per GATE Pattern.

Subjects
Full Length Mock - 1
Full Length Mock - 2
Full Length Mock - 3
Full Length Mock - 4
Full Length Mock - 5
Full Length Mock - 6
Full Length Mock - 7
Full Length Mock - 8
Full Length Mock - 9
Full Length Mock - 10

Finally... How to get registered for Test Series ?

Step - I	Step - II
<p>Visit http://onlinetestseries.gateacademy.co.in Click on New Registration Fill the Form, You will be Redirected to the Test Portal Click on buy Package Make Payment using Coupon code (For gate academy student) or by online payment.</p>	<p>Send completely filled registration form to our office (for gate academy student)</p>