

Commencing from 1<sup>st</sup> July, 2017

Streams offered: CE, ME, EE, EC, CS, IN, PI Admission Open www.madeeasy.in

### **About Test Series:**

GATE-2018 Online Test Series is designed to provide the real time exam experience to the aspirants. Part Syllabus and Full Syllabus tests are designed for thorough coverage of the entire syllabus in a systematic way. Most importantly, these tests are designed as per revised syllabus of GATE. Online Test Series is the best platform to enable concept building and to improve the performance. The test papers are developed considering previous exam papers and the standard of the questions will be matching the actual examination in all the aspects, helping students to rectify their weakness and excel in the examination.

### **Who Develops?**

MADE EASY has dedicated R&D team which consists of experienced faculties, professors from reputed colleges/Universities, GATE and ESE toppers. Our team closely analyses the examination trends and accordingly quality questions are newly framed every year. In these Online Tests Series all the parameters like test standard, question quality, number of questions, negative marking are aligned as per the actual exam pattern. Special care is taken to design the test papers as per revised pattern of GATE.

### What is inside?

## Total Grant Tests

### **36** Premium Tests

- 24 Subject-wise Tests containing
   33 Questions each 792 Ques
- 12 Full Syllabus Test containing
   65 Questions each
   780 Ques

### **24** Practice Tests

- 2 Modules for each subject
- 16 Questions in each Module
- Total 24 Tests containing 384 Ques

1572 Questions + 384 Questions =

1956 Questions

### **Key Features:**



Newly designed quality questions as per standard of GATE



Fully explained and well illustrated solutions



Practice questions for quick revision



Comparison with toppers with All Indian Rank



Video Solutions by senior faculties



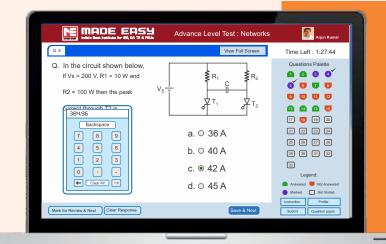
Difficulty level bifurcated in basic level and advanced level



Subject-wise Analysis of performance



Tests will remain active till actual GATE Examination



### MADE EASY GATE - 2018 Online Test Series

- Same Look & Feel
- Same Question Window
- Fast Server Speed
- Compatible with all Operating Systems
- MCQ & Numerical Answer Type Questions

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### MADE EASY

### **GATE 2018 Online Test Series**

### **36 Premium Tests:** Detailed Schedule

### **Civil Engineering**

Test No.	Test Type	Test Syllabus	No. of Ques.	Marks	Timing	Activation Date
1	Basic Level Test - 1 : Part Syllabus	Strength of Material	33	50	90 min	
2	Basic Level Test - 2 : Part Syllabus	Concrete Structures	33	50	90 min	
3	Basic Level Test - 3 : Part Syllabus	Environmental Engineering	33	50	90 min	
4	Basic Level Test - 4 : Part Syllabus	Engineering Mathematics	33	50	90 min	
5	Basic Level Test - 5 : Part Syllabus	Fluid Mechanics & Hydraulics	33	50	90 min	
6	Basic Level Test - 6 : Part Syllabus	General Aptitude	33	50	90 min	1 <sup>st</sup> July
7	Basic Level Test - 7 : Part Syllabus	Transportation Engg. & Geomatics Engg.	33	50	90 min	2017
8	Basic Level Test - 8 : Part Syllabus	Structural Analysis	33	50	90 min	
9	Basic Level Test - 9 : Part Syllabus	Geotechnical Engg.	33	50	90 min	
10	Basic Level Test - 10 : Part Syllabus	Steel Structures	33	50	90 min	
11	Basic Level Test - 11: Part Syllabus	Hydrology & Irrigation	33	50	90 min	
12	Basic Level Test - 12: Part Syllabus	Engineering Mechanics, Construction Materials and Management	33	50	90 min	
13	Basic Level Test - 13: Full Syllabus	Full Syllabus Test-1	65	100	180 min	
14	Basic Level Test - 14: Full Syllabus	Full Syllabus Test-2	65	100	180 min	1⁵ Aug
15	Basic Level Test - 15: Full Syllabus	Full Syllabus Test-3	65	100	180 min	2017
16	Basic Level Test - 16: Full Syllabus	Full Syllabus Test-4	65	100	180 min	
17	Advance Level Test - 1 : Part Syllabus	Strength of Material	33	50	90 min	
18	Advance Level Test - 2 : Part Syllabus	RCC	33	50	90 min	
19	Advance Level Test - 3: Part Syllabus	Environmental Engineering	33	50	90 min	1" Sept 2017
20	Advance Level Test - 4 : Part Syllabus	Engineering Mathematics	33	50	90 min	
21	Advance Level Test - 5: Part Syllabus	Fluid Mechanics & Hydraulics	33	50	90 min	
22	Advance Level Test - 6: Part Syllabus	General Aptitude	33	50	90 min	
23	Advance Level Test - 7: Part Syllabus	Transportation Engg. & Surveying	33	50	90 min	
24	Advance Level Test - 8 : Part Syllabus	Structural Analysis	33	50	90 min	
25	Advance Level Test - 9 : Part Syllabus	Soil Mechanics & Foundation Engg.	33	50	90 min	1⁵ Oct 2017
26	Advance Level Test - 10 : Part Syllabus	Steel Structures	33	50	90 min	
27	Advance Level Test - 11 : Part Syllabus	Hydrology & Irrigation	33	50	90 min	
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31	Advance Level Test - 15 : Full Syllabus	Full Syllabus Test-7	65	100	180 min	
32	Advance Level Test - 16 : Full Syllabus	Full Syllabus Test-8	65	100	180 min	1 <sup>st</sup> Nov
33	GATE Mock Test - 1 : Full Syllabus	GATE Mock Test 1	65	100	180 min	2017
34	GATE Mock Test - 2 : Full Syllabus	GATE Mock Test 2	65	100	180 min	
35	GATE Mock Test - 3 : Full Syllabus	GATE Mock Test 3	65	100	180 min	
36	GATE Mock Test - 4 : Full Syllabus	GATE Mock Test 4	65	100	180 min	







### **24 Practice Tests** Detailed Schedule

### **Civil Engineering**

Tests	Test Date	Practice Tests	Test Syllabus	No. of Ques.	Marks/ Timing
1		Solid Mechanics -1	Solid Mechanics: Bending moment and shear force in statically determinate beams; Simple stress and strain relationships; Theories of failures.	16	25/45 min
2		Solid Mechanics -2	Simple bending theory, flexural and shear stresses, shear centre; Uniform torsion, buckling of column, combined and direct bending stresses.	16	25/45 min
3	Solid Mechanics -1  Solid Mechanics -1  Solid Mechanics: Bending moment and shear force in statically determinate beams; Simple stress and strain relationships; Theories of failures.  Simple bending theory, flexural and shear stresses, shear centre; Uniform		16	25/45 min	
4		Structural Analysis-2		16	25/45 min
5		Construction Materials	structures; Friction and its applications; Kinematics of point mass and rigid body; Centre of mass; Euler's	16	25/45 min
6		Construction Materials	constituents, mix design, short-term and long-term properties; Bricks and mortar; Timber; Bitumen. Construction Management: Types of construction projects; Tendering and construction contracts; Rate analysis and	16	25/45 min
7		Concrete Structures-1 Working stress, Limit state and Ultimate load design concepts; Design of beams.		16	25/45 min
8		Concrete Structures-2		16	25/45 min
9		Steel Structures-1	Connections - simple and eccentric, beam-column connections; Plastic analysis of beams and frames.	16	25/45 min
10		Steel Structures-2		16	25/45 min
11			Unified and Indian standard soil classification system; Permeability - one dimensional flow, Darcy's law; Seepage through soils - two-dimensional flow, flow nets, uplift pressure, piping; Principle of effective stress, capillarity, seepage force and quicksand condition; Compaction in laboratory and field conditions; One-dimensional consolidation, time rate of consolidation; Mohr's circle, stress paths, effective and total shear strength	16	25/45 min
12			penetration and cone penetration tests; Earth pressure theories - Rankine and Coulomb; Stability of slopes - finite and infinite slopes, method of slices and Bishop's method; Stress distribution in soils - Boussinesq's and Westergaard's theories, pressure bulbs; Shallow foundations - Terzaghi's and Meyerhoff's bearing capacity theories, effect of water table; Combined footing and raft foundation; Contact pressure; Settlement analysis in sands and clays; Deep foundations - types of piles,	16	25/45 min
13			corresponding equations; Potential flow, applications of momentum and energy equations; Laminar and turbulent flow;	16	25/45 min
14			velocity triangles; Basics of hydraulic machines, specific speed of pumps and turbines; Channel Hydraulics - Energy-depth	16	25/45 min
15		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	hydrograph analysis, flood estimation and routing, reservoir capacity, reservoir and channel routing, surface run-off	16	25/45 min
16		, ,,	head works, gravity dams and spillways; Design of weirs on permeable foundation; Types of irrigation systems, irrigation	16	25/45 min
17			requirements, basic unit operations and unit processes for surface water treatment, distribution of water. Air Pollution: Types of pollutants, their sources and impacts, air pollution meteorology, air pollution control, air quality standards and limits. Noise	16	25/45 min
18			treatment of wastewater, effluent discharge standards. Domestic wastewater treatment, quantity of characteristics of domestic wastewater, primary and secondary treatment. Unit operations and unit processes of domestic wastewater, sludge disposal. Municipal Solid Wastes: Characteristics, generation, collection and transportation of solid wastes,	16	25/45 min
19		Engineering & Geomatics	elements, sight distances, horizontal and vertical alignments; Geometric design of railway track; Airport runway length, taxiway and exit taxiway design. Highway Pavements: Highway materials - desirable properties and quality control tests; Design of bituminous paving mixes; Design factors for flexible and rigid pavements; Design of flexible pavement using IRC: 37-2012; Design of rigid pavements using IRC: 58-2011; Distresses in concrete pavements. Traffic Engineering: Traffic studies on flow, speed, travel time - delay and O-D study, PCU, peak hour factor, parking study, accident study and analysis, statistical analysis of traffic data; Microscopic and macroscopic parameters of traffic flow, fundamental relationships; Control devices, signal design by Webster's	16	25/45 min
20			angle measurement - Levelling and trigonometric levelling; Traversing and triangulation survey; Total station; Horizontal and vertical curves. Photogrammetry - scale, flying height; Remote sensing - basics, platform and sensors, visual image	16	25/45 min
21		Engg. Mathematics-1	Linear Algebra, Calculus, Numerical Methods.	16	25/45 min
22		Engg. Mathematics-2	Ordinary Differential Equation (ODE), Partial Differential Equation (PDE), Probability and Statistics.	16	25/45 min
23		General Aptitude-1	Verbal Ability and Reasoning	16	25/45 min
24		General Aptitude-2	Numerical Ability	16	25/45 min







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# Advance Level Test: Networks | Columbia | C

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### **MADE EASY**

### **GATE 2018 Online Test Series**

### **36 Premium Tests:** Detailed Schedule

### **Mechanical Engineering**

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1	Basic Level Test - 1 : Part Syllabus	Strength of Materials	33	50	90 min	
2	Basic Level Test - 2 : Part Syllabus	Thermodynamics	33	50	90 min	
3	Basic Level Test - 3 : Part Syllabus	Fluid Mechanics & Hydraulic Machines	33	50	90 min	
4	Basic Level Test - 4 : Part Syllabus	Engineering Mathematics	33	50	90 min	
5	Basic Level Test - 5 : Part Syllabus	Theory of Machines	33	50	90 min	
6	Basic Level Test - 6 : Part Syllabus	General Aptitude	33	50	90 min	1 <sup>st</sup> July
7	Basic Level Test - 7 : Part Syllabus	Heat Transfer	33	50	90 min	2017
8	Basic Level Test - 8 : Part Syllabus	Engineering Mechanics and Engineering Materials	33	50	90 min	
9	Basic Level Test - 9 : Part Syllabus	Manufacturing Engineering	33	50	90 min	
10	Basic Level Test - 10 : Part Syllabus	I.C Engine, Power Plant, Refrigeration & Air-Conditioning	33	50	90 min	
11	Basic Level Test - 11: Part Syllabus	Industrial Engineering	33	50	90 min	
12	Basic Level Test - 12: Part Syllabus	Machine Design	33	50	90 min	
13	Basic Level Test - 13: Full Syllabus	Full Syllabus Test-1	65	100	180 min	
14	Basic Level Test - 14: Full Syllabus	Full Syllabus Test-2	65	100	180 min	1⁵t Aug
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19	Advance Level Test - 3: Part Syllabus	Fluid Mechanics & Hydraulic Machines	33	50	90 min	1st Sept 2017
20	Advance Level Test - 4 : Part Syllabus	Engineering Mathematics	33	50	90 min	
21	Advance Level Test - 5: Part Syllabus	Theory of Machines	33	50	90 min	-
22	Advance Level Test - 6: Part Syllabus	General Aptitude	33	50	90 min	
23	Advance Level Test - 7: Part Syllabus	Heat Transfer	33	50	90 min	-
24	Advance Level Test - 8 : Part Syllabus	Engineering Mechanics and Engineering Materials	33	50	90 min	-
25	Advance Level Test - 9 : Part Syllabus	Manufacturing Engineering	33	50	90 min	1⁵ Oct 2017
26	Advance Level Test - 10 : Part Syllabus	I.C Engine, Power Plant, Refrigeration & Air-Conditioning	33	50	90 min	
27	Advance Level Test - 11 : Part Syllabus	Industrial Engineering	33	50	90 min	
28	Advance Level Test - 12 : Part Syllabus	Machine Design	33	50	90 min	
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### **24 Practice Tests** Detailed Schedule

### **Mechanical Engineering**

Tests	Test Date	Practice Tests	Test Syllabus	No. of Ques.	Marks/ Timing
1		Strength of Materials-1	Stress and strain, elastic constants, Poisson's ratio; Mohr's circle for plane stress and plane strain; thin cylinders; shear force and bending moment diagrams; bending and shear stresses; deflection of beams.	16	25/45 min
2		Strength of Materials-2	Torsion of circular shafts; Euler's theory of columns; energy methods; thermal stresses; strain gauges and rosettes; testing of materials with universal testing machine; testing of hardness and impact strength.	16	25/45 min
3		Fluid Mechanics	Fluid properties; fluid statics, manometry, buoyancy, forces on submerged bodies, stability of floating bodies; control-volume analysis of mass, momentum and energy; fluid acceleration; differential equations of continuity and momentum; Bernoulli's equation; dimensional analysis; viscous flow of incompressible fluids, boundary layer, elementary turbulent flow, flow through pipes, head losses in pipes, bends and fittings.	16	25/45 min
4		Hydraulic Machines	Impulse and reaction principles, velocity diagrams, Pelton-wheel, Francis and Kaplan turbines.	16	25/45 min
5		Thermodynamics-1	Thermodynamic systems and processes; properties of pure substances, behaviour of ideal and real gases; zeroth and first laws of thermodynamics, calculation of work and heat in various processes	16	25/45 min
6	20 <sup>th</sup> June 2017	2017  Displacement, velocity and assoluration analysis of plane mechanisms:		16	25/45 min
7		Theory of Machines-1	Displacement, velocity and acceleration analysis of plane mechanisms; dynamic analysis of linkages; cams; gears and gear trains; flywheels and governors.	16	25/45 min
8		Theory of Machines-2	: Balancing of reciprocating and rotating masses; gyroscope. Free and forced vibration of single degree of freedom systems, effect of damping; vibration isolation; resonance; critical speeds of shafts.	16	25/45 min
9		Heat Transfer-1	Modes of heat transfer; one dimensional heat conduction, resistance concept and electrical analogy, heat transfer through fins; unsteady heat conduction, lumped parameter system, Heisler's charts; thermal boundary layer, dimensionless parameters in free and forced convective heat transfer, heat transfer correlations for flow over flat plates and through pipes, effect of turbulence	16	25/45 min
10		Heat Transfer-2	Heat exchanger performance, LMTD and NTU methods; radiative heat transfer, Stefan-Boltzmann law, Wien's displacement law, black and grey surfaces, view factors, radiation network analysis.	16	25/45 min
11		Manufacturing Engg-1	Casting, Forming and Joining Processes: Different types of castings, design of patterns, moulds and cores; solidification and cooling; riser and gating design. Plastic deformation and yield criteria; fundamentals of hot and cold working processes; load estimation or bulk (forging, rolling, extrusion, drawing) and sheet (shearing, deep drawing, bending) metal forming processes; principles of powder metallurgy. Principles of welding, brazing, soldering and adhesive bonding. Machining and Machine Tool Operations: Mechanics of machining; basic machine, tools; single and multi-point cutting tools, tool geometry and materials, tool life and wear; economics of machining; principles of non-traditional machining processes; principles of work holding, design of jigs and fixtures.	16	25/45 min
12		Manufacturing Engg-2	Metrology and Inspection: Limits, fits and tolerances; linear and angular measurements; comparators; gauge design; interferometry; form and finish measurement; alignment and testing methods; tolerance analysis in manufacturing and assembly.  Computer Integrated Manufacturing: Basic concepts of CAD/CAM and their integration tools.	16	25/45 min
13		Power Plant Engg. + IC Engines	Power Plant Engineering: Air and gas compressors; vapour and gas power cycles, concepts of regeneration and reheat. I.C. Engines: Air-standard Otto, Diesel and dual cycles.	16	25/45 min
14		Refrigeration and Air conditioning	Vapour and gas refrigeration and heat pump cycles; properties of moist air, psychrometric chart, basic psychrometric processes.	16	25/45 min
15	20 <sup>th</sup> July	Industrial Engineering-1	Production Planning and Control: Forecasting models, aggregate production planning, scheduling, materials requirement planning. Inventory Control: Deterministic models; safety stock inventory control systems.	16	25/45 min
16	2017	Industrial Engineering-2	Operations Research: Linear programming, simplex method, transportation, assignment, network flow models, simple queuing models, PERT and CPM.	16	25/45 min
17		Engineering Mechanics-1	Free-body diagrams and equilibrium; trusses and frames; virtual work; kinematics and dynamics of particles and of rigid bodies in plane motion; impulse and momentum (linear and angular) and energy formulations, collisions.	16	25/45 min
18		Engineering Mechanics-2	Structure and properties of engineering materials, phase diagrams, heat treatment, stress-strain diagrams for engineering materials.	16	25/45 min
19		Machine Design-1	Design for static and dynamic loading; failure theories; fatigue strength and the S-N diagram; principles of the design of machine elements such as bolted, riveted and welded joints	16	25/45 min
20		Machine Design-2	Principles of the design of machine elements such as shafts, gears, rolling and sliding contact bearings, brakes and clutches, springs.	16	25/45 min
21		Engg. Mathematics-1	Linear Algebra, Calculus, Differential Equations.	16	25/45 min
22		Engg. Mathematics-1	Complex variables Probability and Statistics Numerical Methods	16	25/45 min
23		General Aptitude-1	Verbal Ability and Reasoning	16	25/45 min
24		General Aptitude-2	Numerical Ability	16	25/45 min

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### 36 Premium Tests: Detailed Schedule

### **Electrical Engineering**

Test No.	Test Type	Test Syllabus	No. of Ques.	Marks	Timing	Activation Date
1	Basic Level Test - 1 : Part Syllabus	Electric Circuits	33	50	90 min	
2	Basic Level Test - 2 : Part Syllabus	Control Systems	33	50	90 min	
3	Basic Level Test - 3 : Part Syllabus	Electrical Machines	33	50	90 min	
4	Basic Level Test - 4 : Part Syllabus	Engineering Mathematics	33	50	90 min	
5	Basic Level Test - 5 : Part Syllabus	Power Systems	33	50	90 min	
6	Basic Level Test - 6 : Part Syllabus	General Aptitude	33	50	90 min	1st July
7	Basic Level Test - 7 : Part Syllabus	Signals & Systems	33	50	90 min	2017
8	Basic Level Test - 8 : Part Syllabus	Power Electronics & Drives	33	50	90 min	
9	Basic Level Test - 9 : Part Syllabus	Electrical & Electronics Measurements	33	50	90 min	
10	Basic Level Test - 10 : Part Syllabus	Digital Electronics	33	50	90 min	
11	Basic Level Test - 11: Part Syllabus	Analog Electronics	33	50	90 min	
12	Basic Level Test - 12: Part Syllabus	Microprocessors & Electromagnetic Fields	33	50	90 min	
13	Basic Level Test - 13: Full Syllabus	Full Syllabus Test-1	65	100	180 min	
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16	Basic Level Test - 16: Full Syllabus	Full Syllabus Test-4	65	100	180 min	
17	Advance Level Test - 1 : Part Syllabus	Networks	33	50	90 min	
18	Advance Level Test - 2 : Part Syllabus	Control Systems	33	50	90 min	
19	Advance Level Test - 3: Part Syllabus	Electrical Machines	33	50	90 min	1st Sept 2017
20	Advance Level Test - 4: Part Syllabus	Engineering Mathematics	33	50	90 min	
21	Advance Level Test - 5: Part Syllabus	Power Systems	33	50	90 min	
22	Advance Level Test - 6: Part Syllabus	General Aptitude	33	50	90 min	
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### **24 Practice Tests** Detailed Schedule

### **Electrical Engineering**

Tests	Test	Practice Tests	Test Syllabus N		
icsts	Date		Network graph, KCL, KVL, Node and Mesh analysis, Ideal current and voltage sources, Network Theorems:	Ques.	Timing
1		Electric Circuits-1	Thevenin's theorem, Norton's theorem, Superposition theorem, Maximum power transfer theorem, Sinusoidal steady state analysis, Power and power factor in ac circuits, Resonance.	16	25/45 min
2		Electric Circuits-2	Passive filters, Transient response of dc and ac networks, Two port networks, Three phase circuits, Power and power factor in ac circuits.	16	25/45 min
3		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	16	25/45 min
4		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	16	25/45 min
5		Signals and Systems-1	Representation of continuous and discrete-time signals, Shifting and scaling operations, Linear Time Invariant and Causal system, Fourier series representation of continuous periodic signals.	16	25/45 min
6		Signals and Systems-2	Sampling theorem, Applications of Fourier Transform, Laplace Transform and z-Transform.	16	25/45 min
7	20 <sup>th</sup> June 2017	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, 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	16	25/45 min
8		Electrical Machines-2	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.	16	25/45 min
9		Power Systems-1	Power generation concepts, ac and dc transmission concepts, Models and performance of transmission lines and cables, Series and shunt compensation, Electric field distribution and insulators, Distribution systems, Voltage and Frequency control, Power factor correction	16	25/45 min
10		Power Systems-2	Per-unit quantities, Bus admittance matrix, Gauss-Seidel and Newton-Raphson load flow methods, Symmetrical components, Symmetrical and unsymmetrical fault analysis, Principles of over-current, differential and distance protection; Circuit breakers, System stability concepts, Equal area criterion.	16	25/45 min
11		Control Systems-1	Mathematical modeling and representation of systems, Feedback principle, transfer function, Block diagrams and Signal flow graphs, Transient and Steady-state analysis of linear time invariant systems, Routh-Hurwitz	16	25/45 min
12		Control Systems-2	Nyquist criteria, Bode plots, Root loci, Stability analysis, Lag, Lead and Lead-Lag compensators; P, PI and PID controllers; State space model, State transition matrix	16	25/45 min
13		Electrical and Electronic Measurements-1	Bridges and Potentiometers, Measurement of voltage, current, power, energy and power factor	16	25/45 min
14		Electrical and Electronic Measurements-2	Instrument transformers, Digital voltmeters and multimeters, Phase, Time and Frequency measurement; Oscilloscopes, Error analysis	16	25/45 min
15		Analog Electronics-1	Characteristics of diodes, BJT, MOSFET; Biasing, Simple diode circuits: clipping, clamping, rectifiers	16	25/45 min
16		Analog Electronics-2	Amplifiers: Equivalent circuit and Frequency response; Oscillators and Feedback amplifiers; Operational amplifiers: Characteristics and applications; Simple active filters, VCOs and Timers, Schmitt trigger	16	25/45 min
17		Digital Electronics	Combinational and Sequential logic circuits, Multiplexer, Demultiplexer, Sample and hold circuits, A/D and D/A converters	16	25/45 min
18	20 <sup>th</sup> July	Microprocessors	8085Microprocessor: Architecture, Programming and Interfacing	16	25/45 min
19	2017	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, Bidirectional ac to dc voltage source converters, Issues of line current harmonics, Power factor, Distortion factor of ac to dc converters	16	25/45 min
20		Power Electronics-2	DC to DC conversion: Buck, Boost and Buck-Boost converters; Single phase and three phase inverters, Sinusoidal pulse width modulation	16	25/45 min
21		Engg. Mathematics-1	Linear Algebra, Calculus, Differential Equations.	16	25/45 min
22		Engg. Mathematics-2	Complex variables ,Probability and Statistics, Numerical Methods and Transform Theory	16	25/45 min
23		General Aptitude-1	Verbal Ability and Reasoning	16	25/45 min
24		General Aptitude-2	Numerical Ability	16	25/45 min







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Subject-wise Analysis of performance



Tests will remain active till actual GATE Examination

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### MADE EASY

### **GATE 2018 Online Test Series**

### **36 Premium Tests:** Detailed Schedule

### **Electronics Engineering**

Test No.	Test Type	Test Syllabus	No. of Ques.	Marks	Timing	Activation Date
1	Basic Level Test - 1 : Part Syllabus	Networks	33	50	90 min	
2	Basic Level Test - 2 : Part Syllabus	Control Systems	33	50	90 min	
3	Basic Level Test - 3 : Part Syllabus	Electronic Devices	33	50	90 min	
4	Basic Level Test - 4 : Part Syllabus	Engineering Mathematics	33	50	90 min	
5	Basic Level Test - 5 : Part Syllabus	Electromagnetics	33	50	90 min	
6	Basic Level Test - 6 : Part Syllabus	General Aptitude	33	50	90 min	1 <sup>st</sup> July
7	Basic Level Test - 7 : Part Syllabus	Signals & Systems	33	50	90 min	2017
8	Basic Level Test - 8 : Part Syllabus	Analog Communication Systems	33	50	90 min	
9	Basic Level Test - 9 : Part Syllabus	Digital Communication Systems	33	50	90 min	
10	Basic Level Test - 10 : Part Syllabus	Digital Electronics	33	50	90 min	
11	Basic Level Test - 11: Part Syllabus	Analog Electronics	33	50	90 min	
12	Basic Level Test - 12: Part Syllabus	Microprocessors	33	50	90 min	
13	Basic Level Test - 13: Full Syllabus	Full Syllabus Test-1	65	100	180 min	
14	Basic Level Test - 14: Full Syllabus	Full Syllabus Test-2	65	100	180 min	1st Aug
15	Basic Level Test - 15: Full Syllabus	Full Syllabus Test-3	65	100	180 min	2017
16	Basic Level Test - 16: Full Syllabus	Full Syllabus Test-4	65	100	180 min	
17	Advance Level Test - 1 : Part Syllabus	Networks	33	50	90 min	
18	Advance Level Test - 2 : Part Syllabus	Control Systems	33	50	90 min	
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33	GATE Mock Test - 1 : Full Syllabus	GATE Mock Test 1	65	100	180 min	2017
34	GATE Mock Test - 2 : Full Syllabus	GATE Mock Test 2	65	100	180 min	
35	GATE Mock Test - 3 : Full Syllabus	GATE Mock Test 3	65	100	180 min	
36	GATE Mock Test - 4 : Full Syllabus	GATE Mock Test 4	65	100	180 min	







### **24 Practice Tests** Detailed Schedule

### **Electronics Engineering**

Tests	Test Date	Practice Tests	Test Syllabus		Marks/ Timing
1		Networks-1	Network solution methods: nodal and mesh analysis; Network theorems: superposition, Thevenin and Norton's, maximum power transfer; Wye-Delta transformation; Steady state sinusoidal analysis using phasors; Frequency domain analysis of RLC circuits.	16	25/45 min
2		Networks-2	Time domain analysis of simple linear circuits; Solution of network equations using Laplace transform; Linear 2-port network parameters: driving point and transfer functions; State equations for networks.	16	25/45 min
3		Signals and Systems-1	Continuous-time signals: Fourier series and Fourier transform representations, sampling theorem and applications; Continuous LTI systems: definition and properties, causality, stability, impulse response, convolution, poles and zeros, parallel and cascade structure, frequency response, group delay, phase delay.	16	25/45 min
4		Signals and Systems-2	Discrete-time signals: discrete-time Fourier transform (DTFT), DFT, FFT, Z-transform, interpolation of discrete-time signals; Discrete LTI systems: definition and properties, causality, stability, impulse response, convolution, poles and zeros, parallel and cascade structure, digital filter design techniques.	16	25/45 min
5		Electronic Devices-1	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.	16	25/45 min
6	20 <sup>th</sup> 1	Electronic Devices-2	BJT, MOS capacitor, MOSFET, LED, photo diode and solar cell; Integrated circuit fabrication process: oxidation, diffusion, ion implantation, photolithography and twin-tub CMOS process.	16	25/45 min
7	20 <sup>th</sup> June 2017	Analog Circuits-1	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, differential.	16	25/45 min
8		Analog Circuits-2	Feedback, power and operational amplifiers; 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.	16	25/45 min
9		Digital Circuits-1	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.	16	25/45 min
10		Digital Circuits-2	Sequential circuits: latches and flip-flops, counters, shift-registers and finite state machines; Data converters: sample and hold circuits, ADCs and DACs.	16	25/45 min
11		Microprocessors -1	Semiconductor memories: ROM, SRAM, DRAM; 8-bit microprocessor (8085): architecture, programming, memory and I/O interfacing.	16	25/45 min
12		Microprocessors -2	Semiconductor memories: ROM, SRAM, DRAM; 8-bit microprocessor (8085): architecture, programming, memory and I/O interfacing.	16	25/45 min
13		Control Systems-1	Basic control system components; Feedback principle; Transfer function; Block diagram representation; Signal flow graph; Transient and steady-state analysis of LTI systems; Routh-Hurwitz.	16	25/45 min
14		Control Systems-2	Root-locus plots; Frequency response, Nyquist stability criteria and Bode plot; Lag, lead and lag- lead compensation; State variable model and solution of state equation of LTI systems.	16	25/45 min
15		Electromagnetics-1	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.	16	25/45 min
16		Electromagnetics-2	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.	16	25/45 min
17		Communications-1	Analog communications: amplitude modulation and demodulation, angle modulation and demodulation, spectra of AM and FM, superheterodyne receivers, circuits for analog communications.	16	25/45 min
18	20 <sup>th</sup> July	Communications-2	Random processes: autocorrelation and power spectral density, properties of white noise, filtering of random signals through LTI systems.	16	25/45 min
19	2017	Communications-3	Information theory: entropy, mutual information and channel capacity theorem; Digital communications: PCM, DPCM; Inter-symbol interference and its mitigation.	16	25/45 min
20		Communications-4	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, Basics of TDMA, FDMA and CDMA.	16	25/45 min
21		Engineering Mathematics-1	Linear Algebra, Calculus, Differential Equations.	16	25/45 min
22		Engineering Mathematics-2	Vector Analysis, Complex Analysis, Numerical Methods, Probability and Statistics.	16	25/45 min
23		General Aptitude-1	Verbal Ability and Reasoning	16	25/45 min
24		General Aptitude-2	Numerical Ability	16	25/45 min







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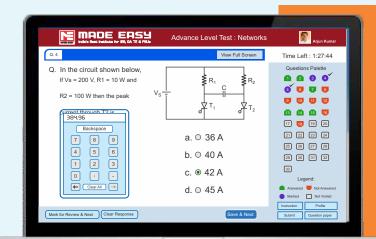
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Subject-wise Analysis of performance



Tests will remain active till actual GATE Examination



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### **GATE 2018 Online Test Series**

### **36 Premium Tests:** Detailed Schedule

### **Computer Science & IT**

		Detailed Seriedale				
Test No.	Test Type	Test Syllabus	No. of Ques.	Marks	Timing	Activation Date
1	Basic Level Test - 1 : Part Syllabus	Theory of Computation	33	50	90 min	
2	Basic Level Test - 2 : Part Syllabus	Algorithms	33	50	90 min	
3	Basic Level Test - 3 : Part Syllabus	Computer Organization and Architecture	33	50	90 min	
4	Basic Level Test - 4 : Part Syllabus	Engineering Mathematics	33	50	90 min	
5	Basic Level Test - 5 : Part Syllabus	Operating System	33	50	90 min	
6	Basic Level Test - 6 : Part Syllabus	General Aptitude	33	50	90 min	1 <sup>st</sup> July
7	Basic Level Test - 7 : Part Syllabus	Databases	33	50	90 min	2017
8	Basic Level Test - 8 : Part Syllabus	Programming and Data Structures	33	50	90 min	
9	Basic Level Test - 9 : Part Syllabus	Computer Networks	33	50	90 min	
10	Basic Level Test - 10 : Part Syllabus	Digital Logic	33	50	90 min	
11	Basic Level Test - 11: Part Syllabus	Compiler Design	33	50	90 min	
12	Basic Level Test - 12: Part Syllabus	Discrete Mathematics	33	50	90 min	
13	Basic Level Test - 13: Full Syllabus	Full Syllabus Test-1	65	100	180 min	
14	Basic Level Test - 14: Full Syllabus	Full Syllabus Test-2	65	100	180 min	1⁵t Aug
15	Basic Level Test - 15: Full Syllabus	Full Syllabus Test-3	65	100	180 min	2017
16	Basic Level Test - 16: Full Syllabus	Full Syllabus Test-4	65	100	180 min	
17	Advance Level Test - 1 : Part Syllabus	Theory of Computation	33	50	90 min	
18	Advance Level Test - 2 : Part Syllabus	Algorithms	33	50	90 min	
19	Advance Level Test - 3: Part Syllabus	Computer Organization and Architecture	33	50	90 min	1st Sept 2017
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23	Advance Level Test - 7: Part Syllabus	Databases	33	50	90 min	
24	Advance Level Test -8:Part Syllabus	Programming and Data Structures	33	50	90 min	
25	Advance Level Test - 9 : Part Syllabus	Computer Networks	33	50	90 min	1 <sup>st</sup> Oct 2017
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34	GATE Mock Test - 2 : Full Syllabus	GATE Mock Test 2	65	100	180 min	
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### **24 Practice Tests** Detailed Schedule

### **Computer Science & IT**

Tests	Test Date	Practice Tests	Test Syllabus	No. of Ques.	Marks/ Timing
1		Discrete Mathematics-1	Propositional and first order logic. Sets, relations, functions and counting	16	25/45 min
2		Discrete Mathematics-2	Partial orders and lattices, groups, Graphs: connectivity, matching, coloring. Recurrence relations and generating functions.	16	25/45 min
3		Digital Logic-1	Boolean algebra, Combinational and Minimization	16	25/45 min
4		Digital Logic-2	Sequential circuits, Number representations and computer arithmetic (fixed and floating point).	16	25/45 min
5		Computer Organization and Architecture-1	Instruction pipelining, Machine instructions and addressing modes and control unit	16	25/45 min
6	20 <sup>th</sup> June	Computer Organization and Architecture-2	ALU, data-path, Memory hierarchy: cache, main memory, secondary storage and I/O interface (interrupt and DMA mode)	16	25/45 min
7	2017	Programming and Data Structures-1	Programming in C, Arrays, stacks and queues.	16	25/45 min
8		Programming and Data Structures-2	Recursion, linked lists, trees, binary search trees, binary heaps and graphs	16	25/45 min
9		Algorithms-1	Sorting, Asymptotic worst case time and space complexity. Algorithm design techniques: greedy and divide-and-conquer and Searching	16	25/45 min
10		Algorithms-2	Hashing, Graph search, minimum spanning trees, shortest paths and dynamic programming	16	25/45 min
11		Theory of Computation-1	Regular expressions and finite automata, Context-free grammars and push-down automata	16	25/45 min
12		Theory of Computation-2 Regular and context-free languages, pumping lemma, Turing machines and undecidability.		16	25/45 min
13		Compiler Design-1	Lexical analysis and syntax-directed translation	16	25/45 min
14		Compiler Design-2	Parsing, Runtime environments and Intermediate code generation	16	25/45 min
15		Operating System-1	Memory management, virtual memory and Deadlock	16	25/45 min
16		Operating System-2	Processes, threads, inter-process communication, concurrency, synchronization, CPU scheduling and File systems	16	25/45 min
17		Databases-1	Er-model. Relational model: relational algebra and normalization	16	25/45 min
18		Databases-2	Tuple calculus, SQL, Integrity constraints, File organization, indexing (e.g., B and B+ trees), Transactions and concurrency control	16	25/45 min
19	20 <sup>th</sup> July 2017	Computer Networks-1	Concept of layering, LAN technologies (Ethernet), Flow and error control techniques, switching, Basics of Wi-Fi, Network security, Authentication, basics of public key and private key cryptography, digital signatures and certificates	16	25/45 min
20		Computer Networks-2	IPv4/IPv6, routers and routing algorithms (distance vector, link state). TCP/UDP and sockets, congestion control, Application layer protocols (DNS, SMTP, POP, FTP, HTTP) and firewalls	16	25/45 min
21		Engineering Mathematics-1	Linear Algebra and Probability	16	25/45 min
22		Engineering Mathematics-2	Calculus and Probability	16	25/45 min
23		General Aptitude-1	Verbal Ability and Reasoning	16	25/45 min
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# Advance Level Test: Networks | Adjunk Kumster | Adjunk Contraction | Adjunction |

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### **GATE 2018 Online Test Series**

### **36 Premium Tests:** Detailed Schedule

### **Instrumentation Engg.**

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1	Basic Level Test - 1 : Part Syllabus	Electrical Circuits	33	50	90 min	
2	Basic Level Test - 2 : Part Syllabus	Control Systems	33	50	90 min	
3	Basic Level Test - 3 : Part Syllabus	Sensors & Industrial Instrumentation	33	50	90 min	
4	Basic Level Test - 4 : Part Syllabus	Engineering Mathematics	33	50	90 min	
5	Basic Level Test - 5 : Part Syllabus	Process Control	33	50	90 min	
6	Basic Level Test - 6 : Part Syllabus	General Aptitude	33	50	90 min	1 <sup>st</sup> July
7	Basic Level Test - 7 : Part Syllabus	Signals & Systems	33	50	90 min	2017
8	Basic Level Test - 8 : Part Syllabus	Measurements	33	50	90 min	
9	Basic Level Test - 9 : Part Syllabus	Communications	33	50	90 min	
10	Basic Level Test - 10 : Part Syllabus	Digital Electronics & Microprocessors	33	50	90 min	
11	Basic Level Test - 11: Part Syllabus	Analog Electronics	33	50	90 min	
12	Basic Level Test - 12: Part Syllabus	Optical Instrumentation	33	50	90 min	
13	Basic Level Test - 13: Full Syllabus	Full Syllabus Test-1	65	100	180 min	
14	Basic Level Test - 14: Full Syllabus	Full Syllabus Test-2	65	100	180 min	1st Aug
15	Basic Level Test - 15: Full Syllabus	Full Syllabus Test-3	65	100	180 min	2017
16	Basic Level Test - 16: Full Syllabus	Full Syllabus Test-4	65	100	180 min	
17	Advance Level Test - 1 : Part Syllabus	Electrical Circuits	33	50	90 min	
18	Advance Level Test - 2 : Part Syllabus	Control Systems	33	50	90 min	
19	Advance Level Test - 3: Part Syllabus	Sensors & Industrial Instrumentation	33	50	90 min	1st Sept 2017
20	Advance Level Test - 4 : Part Syllabus	Engineering Mathematics	33	50	90 min	
21	Advance Level Test - 5: Part Syllabus	Process Control	33	50	90 min	
22	Advance Level Test - 6: Part Syllabus	General Aptitude	33	50	90 min	
23	Advance Level Test - 7: Part Syllabus	Signals & Systems	33	50	90 min	
24	Advance Level Test - 8 : Part Syllabus	Measurements	33	50	90 min	
25	Advance Level Test - 9 : Part Syllabus	Communications	33	50	90 min	1⁵ Oct 2017
26	Advance Level Test - 10 : Part Syllabus	Digital Electronics & Microprocessors	33	50	90 min	
27	Advance Level Test - 11 : Part Syllabus	Analog Electronics	33	50	90 min	
28	Advance Level Test - 12 : Part Syllabus	Optical Instrumentation	33	50	90 min	
29	Advance Level Test - 13: Full Syllabus	Full Syllabus Test-5	65	100	180 min	
30	Advance Level Test - 14 : Full Syllabus	Full Syllabus Test-6	65	100	180 min	
31	Advance Level Test - 15 : Full Syllabus	Full Syllabus Test-7	65	100	180 min	
32	Advance Level Test - 16 : Full Syllabus	Full Syllabus Test-8	65	100	180 min	1 <sup>st</sup> Nov
33	GATE Mock Test - 1 : Full Syllabus	GATE Mock Test 1	65	100	180 min	2017
34	GATE Mock Test - 2 : Full Syllabus	GATE Mock Test 2	65	100	180 min	
35	GATE Mock Test - 3 : Full Syllabus	GATE Mock Test 3	65	100	180 min	
36	GATE Mock Test - 4 : Full Syllabus	GATE Mock Test 4	65	100	180 min	







### **24 Practice Tests** Detailed Schedule

### **Instrumentation Engg.**

Tests	Test Date	Practice Tests	Test Syllabus	No. of Ques.	Marks/ Timing
1		Electrical Circuits-1	Voltage and current sources: independent, dependent, ideal and practical; v-i relationships of resistor, inductor, mutual inductor and capacitor; transient analysis of RLC circuits with dc excitation. Kirchoff's laws, mesh and nodal analysis, superposition, Thevenin, Norton, maximum power transfer and reciprocity theorems.	16	25/45 min
2		Electrical Circuits-2	Peak-, average- and rms values of ac quantities; apparent-, active- and reactive powers; phasor analysis, impedance and admittance; series and parallel resonance, locus diagrams, realization of basic filters with R, L and C elements. One-port and two-port networks, driving point impedance and admittance, open-, and short circuit parameters.	16	25/45 min
3		Signals and Systems-1	Periodic, aperiodic and impulse signals; Laplace, Fourier and; transfer function, frequency response of first and second order linear time invariant systems, impulse response of systems; convolution, correlation.	16	25/45 min
4		Signals and Systems-2	Discrete time system: impulse response, frequency response, pulse transfer function; z-transforms; DFT and FFT; basics of IIR and FIR filters.	16	25/45 min
5		Control Systems-1	Feedback principles, signal flow graphs, transient response, steady-state-errors, Routh criteria, root loci.	16	25/45 min
6	20 <sup>th</sup> June	Control Systems-2	Nyquist criteria, Bode plot; design of lead, lag and lead-lag compensators, state-space representation of systems; time-delay systems.	16	25/45 min
7	2017	Control Systems-3	Mechanical, hydraulic and pneumatic system components, synchropair, servo and stepper motors, servo valves; on-off, P, P-I, P-I-D, cascade, feedforward, and ratio controllers.	16	25/45 min
8		Analog Electronics-1	Characteristics and applications of diode, Zener diode, BJT and MOSFET; small signal analysis of transistor circuits, feedback amplifiers; voltage controlled oscillators and phase locked loop.	16	25/45 min
9		Analog Electronics-2	Feedback amplifiers characteristics of operational amplifiers; applications of opamps: difference amplifier, adder, subtractor, integrator, differentiator, instrumentation amplifier, active filters and other circuits. Oscillators, signal generators (Schmitt trigger, multi-vibrators,).	16	25/45 min
10		Digital Electronics-1	Basics of number systems, Combinational logic circuits, minimization of Boolean functions. IC families: TTL and CMOS. Arithmetic circuits, comparators, sequential circuits, flipflops, shift registers, timers and counters; sample-and-hold circuit, multiplexer.	16	25/45 min
11		Digital Electronics-2	analog-todigital (successive approximation, integrating, flash and sigma-delta) and digital-toanalog converters (weighted R, R-2R ladder and current steering logic). Characteristics of ADC and DAC (resolution, quantization, significant bits, conversion/settling time) 8-bit microprocessor and microcontroller: applications, memory and input-output interfacing; basics of data acquisition systems.	16	25/45 min
12		Measurements-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; Measurement of voltage and current.	16	25/45 min
13		Measurements-2	bridges for measurement of R, L and C, Q-meter; power measurement 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.	16	25/45 min
14		Sensors and Industrial Instrumentation-1	Resistive-, capacitive-, inductive-, piezoelectric-, Hall effect sensors and associated signal conditioning circuits.	16	25/45 min
15		Sensors and Industrial Instrumentation-2	Transducers for industrial instrumentation: displacement (linear and angular), velocity, acceleration, force, torque, vibration, shock, liquid level and pH measurement; conductivity and viscosity measurement.	16	25/45 min
16		Sensors and Industrial Instrumentation-3	Pressure measurement (including low pressure), flow measurement (differential pressure, variable area, electromagnetic, ultrasonic, turbine and open channel flow meters) temperature measurement (thermocouple, bolometer, RTD (3/4 wire), thermistor, pyrometer and semiconductor).	16	25/45 min
17		Communication-1	Amplitude- and frequency modulation and demodulation; Shannon's sampling theorem.	16	25/45 min
18	20 <sup>th</sup> July	Communication-2	Pulse code modulation; frequency and time division multiplexing, amplitude-, phase-, frequency-, pulse shift keying for digital modulation.	16	25/45 min
19	2017	Optical Instrumentation-1	Basics of fiber optic sensing; interferometer: applications in metrology.	16	25/45 min
20		Optical Instrumentation-2	Optical sources and detectors: LED, laser, photo-diode, light dependent resistor and their characteristics	16	25/45 min
21		Engineering Mathematics-1	Linear Algebra, Calculus, Differential Equations.	16	25/45 min
22		Engineering Mathematics-2	Vector Analysis, Complex Analysis, Numerical Methods, Probability and Statistics.	16	25/45 min
23		General Aptitude-1	Verbal Ability and Reasoning	16	25/45 min
24		General Aptitude-2	Numerical Ability	16	25/45 min







Commencing from 1<sup>st</sup> July, 2017

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### 36 Premium Tests: Detailed Schedule

### **Production & Industrial Engg.**

Test No.	Test Type	Test Syllabus	No. of Ques.	Marks	Timing	Activation Date	
1	Basic Level Test - 1 : Part Syllabus	TOM & Engineering Mechanics	33	50	90 min		
2	Basic Level Test - 2 : Part Syllabus	Thermodynamics	33	50	90 min		
3	Basic Level Test - 3 : Part Syllabus	Strength of Materials	33	50	90 min		
4	Basic Level Test - 4 : Part Syllabus	Fluid Mechanics	33	50	90 min		
5	Basic Level Test - 5 : Part Syllabus	Heat Transfer + IC Engine	33	50	90 min		
6	Basic Level Test - 6 : Part Syllabus	General Aptitude	33	50	90 min	1 <sup>st</sup> July	
7	Basic Level Test - 7 : Part Syllabus	Engineering Mathematics	33	50	90 min	2017	
8	Basic Level Test - 8 : Part Syllabus	Machine Design	33	50	90 min		
9	Basic Level Test - 9 : Part Syllabus	Manufacturing Process- I+ Material Science	33	50	90 min		
10	Basic Level Test - 10 : Part Syllabus	Manufacturing Process- II	33	50	90 min		
11	Basic Level Test - 11: Part Syllabus	Industrial Engineering	33	50	90 min		
12	Basic Level Test - 12: Part Syllabus	Operation Research	33	50	90 min		
13	Basic Level Test - 13: Full Syllabus	Full Syllabus Test-1	65	100	180 min		
14	Basic Level Test - 14: Full Syllabus	Full Syllabus Test-2	65	100	180 min	1⁵t Aug	
15	Basic Level Test - 15: Full Syllabus	Full Syllabus Test-3	65	100	180 min	2017	
16	Basic Level Test - 16: Full Syllabus	Full Syllabus Test-4	65	100	180 min		
17	Advance Level Test - 1 : Part Syllabus	TOM & Engineering Mechanics	33	50	90 min		
18	Advance Level Test - 2 : Part Syllabus	Thermodynamics	33	50	90 min		
19	Advance Level Test - 3: Part Syllabus	Strength of Materials	33	50	90 min	1" Sept 2017	
20	Advance Level Test - 4 : Part Syllabus	Fluid Mechanics	33	50	90 min		
21	Advance Level Test - 5: Part Syllabus	Heat Transfer + IC Engine	33	50	90 min		
22	Advance Level Test - 6: Part Syllabus	General Aptitude	33	50	90 min		
23	Advance Level Test - 7: Part Syllabus	Engineering Mathematics	33	50	90 min		
24	Advance Level Test -8:Part Syllabus	Machine Design	33	50	90 min		
25	Advance Level Test - 9 : Part Syllabus	Manufacturing Process- I+ Material Science	33	50	90 min	1 <sup>st</sup> Oct 2017	
26	Advance Level Test - 10 : Part Syllabus	Manufacturing Process- II	33	50	90 min		
27	Advance Level Test - 11 : Part Syllabus	Industrial Engineering	33	50	90 min		
28	Advance Level Test - 12: Part Syllabus	Operation Research	33	50	90 min		
29	Advance Level Test - 13: Full Syllabus	Full Syllabus Test-5	65	100	180 min		
30	Advance Level Test - 14 : Full Syllabus	Full Syllabus Test-6	65	100	180 min		
31	Advance Level Test - 15 : Full Syllabus	Full Syllabus Test-7	65	100	180 min		
32	Advance Level Test - 16 : Full Syllabus	Full Syllabus Test-8	65	100	180 min	1 <sup>st</sup> Nov	
33	GATE Mock Test - 1 : Full Syllabus	GATE Mock Test 1	65	100	180 min	2017	
34	GATE Mock Test - 2 : Full Syllabus	GATE Mock Test 2	65	100	180 min		
35	GATE Mock Test - 3 : Full Syllabus	GATE Mock Test 3	65	100	180 min		
36	GATE Mock Test - 4 : Full Syllabus	GATE Mock Test 4	65	100	180 min		







### **24 Practice Tests** Detailed Schedule

### **Production & Industrial Engg.**

Tests	Test Date	Practice Tests	Test Syllabus		Marks/ Timing
1		Theory of Machines-1	Analysis of planar mechanisms, spur gears		25/45 min
2		Theory of Machines-2	Cams and followers, governors and fly wheels		25/45 min
3		Enggineering Materials and IC Engine	Structure and properties correlation; engineering materials stress strain behavior of metals and alloys; iron-carbon phase diagram, heat treatment, air standard cycles		25/45 min
4		Engg. Mechanics	Equivalent force systems, free body concepts, equations of equilibrium, trusses		25/45 min
5		Machine Design	Design of bolted, riveted and welded joints; interference/shrink fit joints; design of shafts, keys, spur gears, belt drives, brakes and clutches		25/45 min
6		Manufacturing Process-1	1 Casting processes, defects, Joining of materials: Principles of welding processes, welding defects		25/45 min
7	20 <sup>th</sup> June 2017	Manufacturing Process-2	Hot and cold working – forging, rolling, extrusion and wire drawing, Powder processing: Production of metal/ceramic powders, compaction and sintering of metals and ceramic powders Sheet metal working processes – blanking, bending and deep drawing; ideal work and slab analysis; origin of metal working defects, Polymers and Composites: Plastic processing- injection, compression and blow molding, extrusion, calendaring and thermoforming; molding of composites	16	25/45 min
8		Manufacturing Process-3	Machine Tools and Machining: Basic machine tools like centre lathe, milling machine, and drilling machine – construction and kinematics; machining processes - turning, taper turning, thread cutting, drilling, boring, milling, gear cutting, thread production, grinding		25/45 min
9		Manufacturing Process-4	Geometry of single point cutting tools, chip formation, cutting forces, specific cutting energy and power requirements, Merchant's analysis; basis of selection of machining parameters; tool materials, tool wear and tool life, economics of machining, thermal aspects of machining, cutting fluids, machinability;		25/45 min
10		Manufacturing Process-5	Metrology and Inspection, Jigs and fixtures, Non-traditional Manufacturing, Computer Integrated  Manufacturing, Stress-strain relations in elastic and plastic  deformation; concept of flow stress		25/45 min
11		Fluid Mechanics-1	Fluid mechanics – fluid statics, capillary action, contact angle and wetting		25/45 min
12		Fluid Mechanics-2	Bernoulli's equation, flow through pipes, equations of continuity and momentum	16	25/45 min
13	_	Strength of Materials-1	Stress, strain and their relationship; failure theories, Mohr's circle(stress), pressure vessels		25/45 min
14		Strength of Materials-2	Deflection of beams, bending and shear stress, Euler's theory of columns		25/45 min
15		Thermodynamics	Zeroth, first and second law of thermodynamics, thermodynamic system and processes, calculation of work and heat for systems and control volumes		25/45 min
16		Heat Transfer	Heat transfer – basic applications of conduction, convection and radiation		25/45 min
17		Industrial Engineering-1	Quality management: Quality – concept and costs; quality assurance; statistical quality control, acceptance sampling, zero defects, six sigma; total quality management; ISO 9000, Work System Design: Taylor's scientific management and Gilbreths's contributions; Reliability and Maintenance		25/45 min
18	20 <sup>th</sup> July	Industrial Engineering-2	Productivity – concepts and measurements; method study, micro-motion study, principles of motion economy; work measurement ergonomics; job evaluation, merit rating, incentive schemes and wage administration Product Design and Development: Principles, tolerance design; quality and cost considerations; product life cycle; standardization, value engineering, Facility Design: types of plant layout computer aided layout design techniques; assembly line balancing; materials handling systems.		25/45 min
19	2017	Operation Research-1	Linear programming, transportation and assignment models; queuing models; dynamic programming; simulation – manufacturing applications; PERT and CPM		25/45 min
20		Operation Research-2	Engineering Economy and Costing: Elementary cost accounting and methods of depreciation; break-even analysis, techniques for evaluation of capital investments, financial statements, time-cost trade-off, resource leveling. Forecasting techniques, Aggregate production planning; master production scheduling; MRP and MRP-II; JIT manufacturing system inventory control systems		25/45 min
21		Engineering Mathematics-1	Linear Algebra, Calculus, Differential Equations.		25/45 min
22		Engineering Mathematics-2	Complex variables ,Probability and Statistics Numerical Methods		25/45 min
23		General Aptitude-1	Verbal Ability and Reasoning		25/45 min
24		General Aptitude-2	Numerical Ability		25/45 min



