VANI INSTITUTE
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KPTCL - 2022

ONLINE TEST SERIES

SCHEDULE - ELECTRICAL ENGINEERING

SUBJECT WISE GRAND TESTS	MULTI - SUBJECT GRAND TESTS	FULL LENGTH MOCK TESTS	TOTAL TESTS
11	06	08	25

SUBJECT WISE GRAND TESTS

- Each test Consists 50 Questions.
- Duration : 60Minutes
- Test consists of 50 One marks questions and 0.25 Negative Marking.

TEST NO	TEST NAME : SYLLABUS	TEST STATUS NOW
KPTCL-01	**Electric Circuits and Fields :** Circuit elements, network graph, KCL, KVL, Node and Mesh analysis, ideal current and voltage sources, Thevenin's, Norton's, Superposition and Maximum Power Transfer theorems, transient response of DC and AC networks, Sinusoidal steady state analysis, basic filter concepts, two-port networks, Three phase circuits, Magnetically coupled circuits, Gauss Theorem, electric field and potential due to point, line, plane and spherical charge distributions, Ampere's and Biot-Savart's laws; inductance,dielectrics, capacitance; Maxwell's equations.	AVAILABLE
KPTCL -02	**Control Systems :** Principles of feedback, transfer function, block diagrams and signal flow graphs, transient and stability analysis, steady-state errors, transforms and their applications; Routh-hurwitz criterion, Nyquist techniques, Bode plots, root loci, lag, lead and lead-lag compensation, frequency response analysis, state space model, state transition matrix, controllability and observability, linear state variable feedback, PID and industrial controllers.	AVAILABLE
KPTCL -03	**EDC and Analog:** Basics of Semiconductor diodes and transistors and characteristics, Junction and field effect transistors (BJT, FET and MOSFETS) Different types of transistor amplifiers, equivalent circuits and frequency response; oscillators and other circuits, feedback amplifiers, Operational amplifiers – characteristics and applications	AVAILABLE
KPTCL -04	**Signals and 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, Fourier transform, sampling theorem, Laplace transform, Z transforms, Discrete Fourier transform, FFT, linear convolution, discrete cosine transform, FIR filter, IIR filter, bilinear transformation.	AVAILABLE

TEST NO	TEST NAME : SYLLABUS	TEST STATUS NOW
KPTCL -05	**Digital and Microprocessors:** combinational and sequential logic circuits, multiplexers, multi-vibrators, sample and hold circuits, A/D and D/A converters, basics of filter circuits and applications, simple active filters; Microprocessor basics-interfaces and applications.	AVAILABLE
KPTCL -06	**Electrical Machines:** Single phase transformers, basics of three phase transformers , parallel operation, auto-transformer, Induction motors – principles, types, performance characteristics, starting and speed control. DC machines – types, windings, generator characteristics, armature reaction and commutation, starting and speed control of motors,Synchronous machines – performance, regulation, parallel operation of generators, motor starting, characteristics and applications, servo and stepper motors.	AVAILABLE
KPTCL -07	**Measurements & Instrumentation:** SI units, measurement of current, voltage, power, power-factor and energy. Measurement of resistance, inductance capacitance and frequency-bridge methods, transducers and their applications to the measurement of non-electrical quantities like temperature, pressure, strain, displacement etc., cathode ray oscilloscope, Instrument Transformers.	AVAILABLE
KPTCL -08	**Power Systems:** Basic power generation concepts, symmetrical components, fault analysis, Matrix representation of power systems, load flow analysis, and economic operation, System stability concepts, Swing curves and equal area criterion. Concepts of power system dynamics, distributed generation, solar and wind power, smart grid concepts, environmental implications, fundamentals of power economics. Transmission line models and performance, cable performance, insulation, corona and radio interference, power factor correction, principles of protection systems, basics of solid state relays and digital protection; Circuit breakers, Radial and ring-main distribution systems, voltage control, HVDC transmission and FACTS concepts.	AVAILABLE
KPTCL -09	**Material Science :** Electrical Engineering Materials, basics of solid state physics, crystal structures and defects, ceramic materials, insulating materials, conductors. Magnetic materials–basics, properties and applications. Ferrities, ferro-magnetic materials and components; Photo-conductivity; Basics of Nano materials and Superconductors.	AVAILABLE
KPTCL -10	**Aptitude**	AVAILABLE
KPTCL -11	**General awareness**	AVAILABLE

MULTI SUBJECT GRAND TESTS

- Each test Consists 50 Questions.
- Duration : 60Minutes
- Test consists of 50 One marks questions and 0.25 Negative Marking.

TEST NO	TEST NAME	TEST STATUS NOW
KPTCL -12	**Control Systems, Circuits and Fields**	AVAILABLE
KPTCL -13	**Analog and Signals and Systems**	AVAILABLE
KPTCL -14	**Digital & Electrical Machines**	AVAILABLE
KPTCL -15	**Measurements & Instrumentation, Power Systems**	AVAILABLE
KPTCL -16	**General awareness, Aptitude**	AVAILABLE
KPTCL -17	**Material Science, EDC & Microprocessors**	AVAILABLE

FULL LENGTH MOCK TESTS

- Each test Consists 100 Questions.
- Duration : 120Minutes
- Test consists of 100 One marks questions and 0.25 Negative Marking.

TEST NO	TEST NAME	TEST STATUS NOW
KPTCL - 18	Full Length Mock Test - 1	AVAILABLE
KPTCL - 19	Full Length Mock Test - 2	AVAILABLE
KPTCL - 20	Full Length Mock Test - 3	AVAILABLE
KPTCL - 21	Full Length Mock Test – 4	AVAILABLE
KPTCL - 22	Full Length Mock Test - 5	AVAILABLE
KPTCL - 23	Full Length Mock Test - 6	AVAILABLE
KPTCL - 24	Full Length Mock Test - 7	AVAILABLE
KPTCL - 25	Full Length Mock Test - 8	AVAILABLE