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

TSPSC - AEE
ONLINE TEST SERIES

ELECTRICAL ENGINEERING (EE)

No. of Tests : 26

Subject Wise Grand Tests	20
Full Length Mock Tests	6

All tests will be available till 06-08-2017.

TEST SERIES HIGHLIGHTS

- ★ 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.

Subject-wise Tests

Tests will be activated at 6:00 pm on scheduled day

Test No	Subject Name	No. of Questions	Max Marks	Duration	Date of Activation
EE01	Electric Circuits and Fields	50	100	50 Min	20.06.2017
EE02	Test-1 on General Studies & General Abilities	30	30	30 Min	21.06.2017
EE03	Control Systems	50	100	50 Min	23.06.2017
EE04	Test-2 on General Studies & General Abilities	30	30	30 Min	24.06.2017
EE05	Digital Electronics & Micro Processor	50	100	50 Min	26.06.2017
EE06	Test-3 on General Studies & General Abilities	30	30	30 Min	27.06.2017
EE07	Electrical and Electronic Measurements	50	100	50 Min	29.06.2017
EE08	Test-4 on General Studies & General Abilities	30	30	30 Min	30.06.2017
EE09	Electrical Machines -1	50	100	50 Min	02.07.2017
EE10	Test-5 on General Studies & General Abilities	30	30	30 Min	03.07.2017
EE11	Electrical Machines -2	50	100	50 Min	05.07.2017
EE12	Test-6 on General Studies & General Abilities	30	30	30 Min	06.07.2017
EE13	Power Systems-1	50	100	50 Min	08.07.2017
EE14	Test-7 on General Studies & General Abilities	30	30	30 Min	09.07.2017
EE15	Power Systems-2 & Utilization	50	100	50 Min	11.07.2017
EE16	Test-8 on General Studies & General Abilities	30	30	30 Min	12.07.2017
EE17	Analog Electronics	50	100	50 Min	14.07.2017
EE18	Test-9 on General Studies & General Abilities	30	30	30 Min	15.07.2017
EE19	Power Electronics & Drives	50	100	50 Min	17.07.2017
EE20	Test-10 on General Studies & General Abilities	30	30	30 Min	18.07.2017

Full Length Mock Tests

Test No	Mock codes		No. of Questions	Max Marks	Duration	Date of Activation
EE21	Mock-1	PAPER-1 (General Studies & General Abilities)	150	150	150 Min	20.07.2017
EE22	Mock-1	PAPER-2 (Engineering Discipline)	150	300	150 Min	21.07.2017
EE23	Mock-2	PAPER-1 (General Studies & General Abilities)	150	150	150 Min	25.07.2017
EE24	Mock-2	PAPER-2 (Engineering Discipline)	150	300	150 Min	26.07.2017
EE25	Mock-3	PAPER-1 (General Studies & General Abilities)	150	150	150 Min	30.07.2017
EE26	Mock-3	PAPER-2 (Engineering Discipline)	150	300	150 Min	31.07.2017

Syllabus for General Studies & Abilities (Paper-1)

Subject Name	Syllabus
Test-1 on General Studies & General Abilities	Physical, Social and Economic Geography of India & Telangana. Current affairs – Regional, National and International.
Test-2 on General Studies & General Abilities	Indian Constitution; Indian Political System; Governance and Public Policy. Current affairs – Regional, National and International.
Test-3 on General Studies & General Abilities	Socio-economic, Political and Cultural History of Modern India with special emphasis on Indian National Movement. Current affairs – Regional, National and International.
Test-4 on General Studies & General Abilities	Environmental issues; Disaster Management- Prevention and Mitigation Strategies. Current affairs – Regional, National and International. General Science; India's Achievements in Science and Technology.
Test-5 on General Studies & General Abilities	Basic English. (10th Class Standard)
Test-6 on General Studies & General Abilities	Logical Reasoning; Analytical Ability and Data Interpretation.
Test-7 on General Studies & General Abilities	Economic and Social Development of India and Telangana. Social Exclusion; Rights issues such as Gender, Caste, Tribe, Disability etc. and inclusive policies. Current affairs – Regional, National and International.
Test-8 on General Studies & General Abilities	Society, Culture, Heritage, Arts and Literature of Telangana. Policies of Telangana State. Current affairs – Regional, National and International.
Test-9 on General Studies & General Abilities	Socio-economic, Political and Cultural History of Telangana with special emphasis on Telangana Statehood Movement and formation of Telangana state. Current affairs – Regional, National and International.
Test-10 on General Studies & General Abilities	General Science; India's Achievements in Science and Technology. Current affairs – Regional, National and International.

Syllabus for Electrical Engineering(Paper-2)

Subject Name	Syllabus
Electric Circuits and Fields	Network graph, KCL, KVL, Node and Mesh analysis, transient response of DC and AC networks, Sinusoidal steady state analysis, Resonance, basic filter concepts, ideal current and voltage sources, Thevenin's, Norton's, Superposition and Maximum Power Transfer theorems, two-port networks, three phase circuits, Star, Delta connections, Measurement of power by two-wattmeter method, Fourier, Laplace and Z transfroms, 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.
Control Systems	Principles of feedback, transfer function, block diagrams, steady-state errors, Routh and Nyquist techniques, Bode plots, root loci, lag, lead and lead-lag compensation, state space model, state transition matrix, controllability and observability.
Electrical Machines-1	Single phase transformers- equivalent circuit, phaser diagram, tests, regulation and efficiency, three phase transformers - connections, parallel operation, auto-transformer, energy conversion principles, DC machines - types, windings, generator characteristics,losses and efficiency, armature reaction and commutation, starting and speed control of motors, tests.
Analog Electronics	Characeristics of p-n junction diode, Zener diode, BJT, FET, amplifiers- biasing, equivalent circuit and frequeny response; oscillators and feed back amplifiers; Operational amplifiers – characteristics and applications, simple active filters, VCOs and timers, schimitt triggers, multi-vibrators, sample and hold circuits.
Electrical Machines-2	Three phase Induction motors - principles, types, performance characteristics, starting and speed control, Single phase induction motors, Synchronous machines - performance, regulation, parallel operation of generators, motor starting, characteristics and applications, servo motors.
Digital & Micro Processor	Boolean Algebra, miziminition of switiching functions, combinational and sequential logic circuits, Flip flops, counters nad registers, A/D and D/A converters, Microprocessor basics(8085 & 8086), architecture, programming and interfacing.
Power Systems-1	Basic power generation concepts, Economic aspects, per-unit quantities; bus impedance and admittance matrices; load flow study, Economic operation, Load frequncy control, symmetrical components, symmetrical and unsymmetrical fault analysis, Power system stability concepts, swing equation, power angle curve, solution of swing equation, equal area criterion.

Subject Name	Syllabus
Power Electronics & Drives	Semiconductor power diodes, transistors, thyristors, triacs, GTOs, MOSFETs and IGBTs - static characteristics and principles of operation, triggering circuits, commutation circuits, phase control rectifiers, bridge converters - fully controlled and half controlled, dual converters, principles of choppers and inverters, cyclo-converters and ac voltage controllers. Four quadrant operation, Types of loads, Energy loss during starting and braking of dc and ac motors, Types of braking in dc & ac motors, Basic concepts of converter and chopper fed dc drives; V/f control, static rotor resistance control and slip power recovery scheme of 3-phase induction motor dries.
Power Systems-2 & Utilization	Types of Tariffs, transmission line models and performance, cable performance, insulation, Sag and Tension, corona and radio interference, distribution systems, Voltage control, Power factor correction, principles of over current, differencial and distance protection , Generator protection, transformer protection, feeder protection, static relays, Circuit breakers. High frequency eddy current heating, dielectric heating, Arc furnace, electric arc welding & electric resistance welding , illumination: Laws of illumination, MSCP, SV & MV lamps, Factory, street & flood lighting, Electric traction and track electrification, Speed-time curves, Tractive effort, Specific energy consumption, Mechanism of train movement, adhesive weight and coefficient of adhesion, DC motor series parallel control, energy saving.
Electrical and Electronic Measurements	DC, AC Bridges, potentiometers, PMMC, moving iron, dynamometer and induction type instruments, measurement of voltage, current, power, energy and power factor, shunts, multiplliers, instrument transformers, digital voltmeters, CRO; phase, time and frequency measurements using lissajous patterns, error analysis.