



**ACE**<sup>®</sup>  
**Engineering Academy**  
Leading Institute for ESE/GATE/PSUs

**TSPSC**  
**LECTURERS IN GOVERNMENT POLYTECHNICS IN TECHNICAL**  
**EDUCATION SERVICE**  
**Online Test Series**

**Electrical and Electronics Engineering - Schedule**

<b>No.of Tests : 21</b>	
<b>Subject Wise Tests</b>	<b>17</b>
<b>Full Length Mock Tests</b>	<b>4</b>

**Note:**

- ★ The Syllabus considered as per Notification of TSPSC-PL. ACE Engineering Academy does not take any responsibility for deviations in syllabus in the final exam.
- ★ The Dates of Tests may Change according to the TSPSC-PL Exam schedule.
- ★ All Tests will be active till TSPSC-PL Examination.
- ★ Test series available in ENGLISH medium only.
- ★ Tests will be activated at 06:00 pm on the scheduled day.

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## Subject wise Tests

*(No. of Questions: 30, Time duration: 30 Minutes)*

Test No	Name of the Test	Max Marks	Date of Activation
Test-01	<b>Electric Circuits and Fields:</b> 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, Maximum Power Transfer and Reciprocity theorems; two-port networks, three phase circuits; Star, Delta connections, Measurement of power in 3-phase by two-wattmeter method; Fourier, Laplace and Z transforms; 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.	60	30-01-2023
Test-02	<b>Electrical Machines-1:</b> <b>Transformer:</b> Single phase transformer - equivalent circuit, phasor diagram, tests, regulation and efficiency; three phase transformers - connections, parallel operation; auto-transformer. <b>DC machines:</b> Energy conversion principles; DC machines - types, windings, generator and motor characteristics, losses and efficiency, armature reaction and commutation, starting and speed control of motors, tests.	60	02-02-2023
Test-03	<b>General Studies and General Abilities-1:</b> Society, Culture, Heritage, Arts and Literature of Telangana. Policies of Telangana State. Social Exclusion; Rights issues such as Gender, Caste, Tribe, Disability etc. and inclusive policies.	30	04-02-2023
Test-04	<b>Electrical Machines-2:</b> <b>Induction motors:</b> Three phase induction motors - principles, types, performance characteristics, starting and speed control; single phase induction motors. <b>Synchronous machines:</b> Synchronous machines - performance, regulation and parallel operation of alternators, motor starting, characteristics and applications; servo motors.	60	06-02-2023
Test-05	<b>Analog Electronics:</b> Characteristics of p-n junction diode, Zener diode, BJT, FET; amplifiers - biasing, equivalent circuit and frequency response; oscillators and feedback amplifiers; operational amplifiers - characteristics and applications; simple active filters; VCOs and timers. <b>Digital Electronics and Microprocessor:</b> Boolean Algebra, minimization of switching functions combinational and sequential logic circuits; schmitt trigger, multi vibrators Flip flops, counters and registers, sample and hold circuits; A/D and D/A converters; microprocessor basics.(8085 & 8086), architecture, programming and interfacing, 8051 mc BASICS (Architectures. Addressing modes and instruction set).	60	09-02-2023
Test-06	<b>General Studies and General Abilities-2:</b> Economic and Social Development of India and Telangana. Socio-economic, Political and Cultural History of Telangana with special emphasis on Telangana Statehood Movement and formation of Telangana state.	30	11-02-2023
Test-07	<b>Control Systems:</b> 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.	60	13-02-2023
Test-08	<b>Power Systems-1:</b> Basic power generation concepts, Economic aspects, per-unit quantities; bus impedance and admittance matrices; load flow study; symmetrical components; symmetrical & unsymmetrical fault analysis; Power system stability concepts, swing equation, power angle curve, solution of swing equation, equal area criterion.	60	16-02-2023
Test-09	<b>General Studies and General Abilities-3:</b> Physical, Social and Economic Geography of India. Physical, Social and Economic Geography and Demography of Telangana.	30	18-02-2023
Test-10	<b>Power Systems-2:</b> Types of Tariffs; transmission line models and performance; cable performance, insulators, Sag and Tension; corona and radio interference; distribution systems; voltage control; power factor correction. Economic operation; Load Frequency Control; principles of over-current, differential and distance protection; Generator protection, Transformer protection, Feeder protection, static relays; circuit breakers.	60	20-02-2023
Test-11	<b>General Studies and General Abilities-4:</b> General Science; India's Achievements in Science and Technology. Environmental issues; Disaster Management- Prevention and Mitigation Strategies.	30	22-02-2023
Test-12	<b>Electrical and Electronic Measurements:</b> DC, AC Bridges, potentiometers; PMMC, moving iron, dynamometer and induction type instruments; measurement of voltage, current, power, energy and power factor; shunts, multipliers; instrument transformers; digital voltmeters, CRO; phase, time and frequency measurements using lissajous patterns; error analysis.	60	23-02-2023
Test-13	<b>General Studies and General Abilities-5:</b> Socio-economic, Political and Cultural History of Modern India with special emphasis on Indian National Movement. Indian Constitution; Indian Political System; Governance and Public Policy.	30	06-03-2023
Test-14	<b>Power Electronics:</b> 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, inverters, cyclo-converters and ac voltage controllers. <b>Electric Drives:</b> Four quadrant operation, Types of loads, Energy loss during starting and braking of dc and ac motors, Types of braking in dc & ac motors, Basis 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 drives.	60	08-03-2023

Test No	Name of the Test	Max Marks	Date of Activation
Test-15	<b>General Studies and General Abilities-6:</b> Current affairs – Regional, National and International. International Relations and Events.	30	13-03-2023
Test-16	<b>Utilization:</b> 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.	60	15-03-2023
Test-17	<b>General Studies and General Abilities-7:</b> Logical Reasoning; Analytical Ability and Data Interpretation. Basic English. (10th Class Standard)	30	20-03-2023

### Full Length Mock Test

*(No. of Questions: 150, Time duration: 150 Minutes)*

Test-18	Mock-1 PAPER-II (Engineering Discipline)	300	30-03-2023
Test-19	Mock-1 PAPER-I (General Studies & General Abilities)	150	03-04-2023
Test-20	Mock-2 PAPER-II (Engineering Discipline)	300	13-04-2023
Test-21	Mock-2 PAPER-I (General Studies & General Abilities)	150	17-04-2023