



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

**TSPSC**  
**ASSISTANT EXECUTIVE ENGINEERS**  
**Online Test Series**

**Electrical Engineering - Schedule**

No.of Tests : 21 + 30 <i>free</i> practice tests of TSPSC-AEE-2021 OTS		
	TSPSC-AEE-2022	Practice Tests TSPSC-AEE-2021
Subject Wise Tests	17	22
Full Length Mock Tests	4	8
<b>Total Tests - 51</b>		

**Note:**

- ★ The Syllabus considered as per Previous year Notification of TSPSC-AEE. 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-AEE Exam schedule.
- ★ All Tests will be active till TSPSC-AEE Examination.
- ★ Tests will be activated at 06:00 pm on the scheduled day.

## 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 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	01-08-2022
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	06-08-2022
Test-03	<b>General Studies and General Abilities-1:</b> Society, Culture, Heritage, Arts and Literature of Telangana. Policies of Telangana State.	30	07-08-2022
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	10-08-2022
Test-05	<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	13-08-2022
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	14-08-2022
Test-07	<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	17-08-2022
Test-08	<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	18-08-2022
Test-09	<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	20-08-2022
Test-10	<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	21-08-2022
Test-11	<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	24-08-2022
Test-12	<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	25-08-2022
Test-13	<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.	60	27-08-2022
Test-14	<b>General Studies and General Abilities-6:</b> Current affairs – Regional, National and International. International Relations and Events.	30	28-08-2022

Test No	Name of the Test	Max Marks	Date of Activation
Test-15	<p><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.</p> <p><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 &amp; 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.</p>	60	31-08-2022
Test-16	<p><b>Utilization:</b> High frequency eddy current heating, dielectric heating, Arc furnace, electric arc welding &amp; electric resistance welding, Illumination: Laws of illumination, MSCP, SV &amp; MV lamps, Factory, street &amp; 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.</p>	60	03-09-2022
Test-17	<p><b>General Studies and General Abilities-7:</b> Logical Reasoning; Analytical Ability and Data Interpretation. Basic English. (10th Class Standard)</p>	30	04-09-2022

### Full Length Mock Test

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

Test-23	Mock-1 PAPER-II (Engineering Discipline)	300	07-09-2022
Test-24	Mock-1 PAPER-I (General Studies & General Abilities)	150	08-09-2022
Test-25	Mock-2 PAPER-II (Engineering Discipline)	300	14-09-2022
Test-26	Mock-2 PAPER-I (General Studies & General Abilities)	150	15-09-2022

# Free Practice Tests of TSPSC-AEE-2021 Online Test Series

## 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 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	20-07-2022
Test-02	<b>Electrical Machines-1:</b> Single phase transformer - equivalent circuit, phasor diagram, tests, regulation and efficiency; three phase transformers - connections, parallel operation; auto-transformer.	60	
Test-03	<b>General Studies and General Abilities-1:</b> Society, Culture, Heritage, Arts and Literature of Telangana. Policies of Telangana State.	30	
Test-04	<b>Electrical Machines-2:</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	
Test-05	<b>Electrical Machines-3:</b> Three phase induction motors - principles, types, performance characteristics, starting and speed control; single phase induction motors.	60	
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	
Test-07	<b>Electrical Machines-4:</b> Synchronous machines - performance, regulation and parallel operation of alternators, motor starting, characteristics and applications; servo motors.	60	
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	
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	
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.	60	
Test-11	<b>Power Systems-3:</b> Economic operation; Load Frequency Control; principles of over-current, differential and distance protection; Generator protection, Transformer protection, Feeder protection, static relays; circuit breakers.	60	
Test-12	<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	
Test-13	<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	
Test-14	<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	
Test-15	<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	
Test-16	<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.	60	

Test-17	<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.	60	<b>20-07-2022</b>
Test-18	<b>General Studies and General Abilities-6:</b> Current affairs – Regional, National and International. International Relations and Events.	30	
Test-19	<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.	60	
Test-20	<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	
Test-21	<b>General Studies and General Abilities-7:</b> Logical Reasoning; Analytical Ability and Data Interpretation. Basic English. (10th Class Standard)	30	
Test-22	<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	

### Full Length Mock Test

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

Test-23	Mock-1 PAPER-I (General Studies & General Abilities)	150	<b>25-07-2022</b>
Test-24	Mock-1 PAPER-II (Engineering Discipline)	300	
Test-25	Mock-2 PAPER-I (General Studies & General Abilities)	150	
Test-26	Mock-2 PAPER-II (Engineering Discipline)	300	
Test-27	Mock-3 PAPER-I (General Studies & General Abilities)	150	
Test-28	Mock-3 PAPER-II (Engineering Discipline)	300	
Test-29	Mock-4 PAPER-I (General Studies & General Abilities)	150	
Test-30	Mock-4 PAPER-II (Engineering Discipline)	300	

**Note:** The Syllabus considered as per Previous year Notification of TSPSC. ACE Engineering Academy does not take any responsibility for deviations in syllabus in the final exam. The Dates of above Tests may Change according to the TSPSC Exam schedule.

Tests will be activated at 06:00 pm on the scheduled day.