



ACE[®]
Engineering Academy
Leading Institute for ESE/GATE/PSUs

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

Mechanical Engineering - Schedule

No.of Tests : 21	
Subject Wise Tests	17
Full Length Mock Tests	4

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	<p>Engineering Mechanics & Machine Design: Free-body diagrams and equilibrium; Trusses and Frames; Virtual work; Kinematics and Dynamics of Particles and Rigid Bodies in Plane Motion; Impulse and Momentum (Linear and Angular) and Energy Formulations; Impact.</p> <p>Design For Static and Dynamic Loading; Failure Theories; Fatigue Strength; S-N Diagram; Design of Machine Elements such as Bolted, Riveted and Welded Joints, Shafts, Spur Gears, Rolling and Sliding Contact Bearings, Springs, Brakes and Clutches.</p>	60	30-01-2023
Test-02	<p>Strength of Materials: Stress and Strain, Stress-Strain Relationship and 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; Torsion Of Circular Shafts; Euler's Theory Of Columns; Energy Methods; Thermal Stresses; Testing Of Materials with Universal Testing Machine (UTM); Hardness And Impact Strength.</p>	60	02-02-2023
Test-03	<p>General Studies and General Abilities-1: Society, Culture, Heritage, Arts and Literature of Telangana. Policies of Telangana State.</p>	30	04-02-2023
Test-04	<p>Theory of Machines & Vibrations: Displacement, Velocity and Acceleration Analysis of Plane Mechanisms; Dynamic Analysis of Slider-Crank Mechanism; Gears and Gear Trains; Flywheels, Gyroscope and Governors; Balancing of Reciprocating and Rotating Masses.</p> <p>Vibrations: Free and Forced Vibration of Single Degree of Freedom Systems, Effect of Damping; Vibration Isolation; Resonance; Critical Speeds of Shafts.</p>	60	06-02-2023
Test-05	<p>Fluid Mechanics: Fluid Properties; Fluid Statics, Manometry, Buoyancy, Forces on Submerged Bodies, Stability of Floating Bodies; Fluid Acceleration; Differential Equations of Continuity and Momentum; Bernoulli's Equation; Viscous Flow of Incompressible Fluids, Boundary Layer, Elementary Turbulent Flow, Flow Through Pipes, Head Losses in Pipes and Bends.</p> <p>Turbomachinery: Pelton Wheel, Francis and Kaplan Turbines, Impulse and Reaction Principles, Velocity Diagrams.</p> <p>Power Engineering: Air compressors-Reciprocating and rotary compressors; Rankine, Brayton Cycles with Regeneration, Inter cooling and Reheat.</p>	60	09-02-2023
Test-06	<p>General Studies and General Abilities-2: 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.</p>	30	11-02-2023
Test-07	<p>Heat-Transfer: Modes of Heat Transfer; One Dimensional Heat Conduction, Resistance Concept, Electrical Analogy, Fins; Unsteady Heat Conduction, Dimensionless Parameters in Free and Forced Convective Heat Transfer, Various Correlations for Heat Transfer in Flow Over Flat Plates and Through Pipes, Effect of Turbulence; Radiative Heat Transfer, Black And Grey Surfaces, Shape Factors, Network Analysis, Heat Exchanger Performance, LMTD and NTU Methods.</p>	60	13-02-2023
Test-08	<p>Thermodynamics: Thermodynamic systems and processes; properties of pure substances, behavior of ideal and real gases; zeroth and first laws of thermodynamics, calculation of work and heat in various processes; second law of thermodynamics; thermodynamics property, availability and irreversibility; thermodynamic relations.</p> <p>I.C. Engines: Air-standard Otto & Diesel Cycles,</p> <p>Refrigeration and air-conditioning: Vapour Refrigeration Cycle, Heat Pumps, Gas Refrigeration; Reverse Brayton Cycle; Moist Air: Psychrometric Chart, Basic Psychrometric Processes.</p>	60	16-02-2023
Test-09	<p>General Studies and General Abilities-3: Physical, Social and Economic Geography of India. Physical, Social and Economic Geography and Demography of Telangana.</p>	30	18-02-2023
Test-10	<p>Engineering Materials: Structure and Properties of Engineering Materials, Heat Treatment, Stress-Strain Diagrams for Engineering Materials, Iron-carbon diagram.</p> <p>Metrology and Inspection: Limits, Fits and Tolerances; Linear and Angular Measurements; Comparators; Gauge; Interferometry; Form and Surface Finish Measurement; Alignment and Testing Methods; Tolerance Analysis in Manufacturing and Assembly.</p>	60	20-02-2023
Test-11	<p>General Studies and General Abilities-4: General Science; India's Achievements in Science and Technology. Environmental issues; Disaster Management- Prevention and Mitigation Strategies.</p>	30	22-02-2023
Test-12	<p>Metal Casting: Design of Patterns, Moulds and Cores; Solidification and Cooling; Riser and Gating Design.</p> <p>Metal Forming: Plastic Deformation and Yield Criteria; Fundamentals of Hot and Cold Working Processes; Load Estimation for Bulk (Forging, Rolling, Extrusion, Drawing) and Sheet (Shearing, Deep Drawing, Bending) Metal Forming Processes; Principles of Powder Metallurgy.</p> <p>Joining Processes: Principles (Gas, Arc, Resistance and Solid State) of Welding, Brazing, Soldering; Adhesive Bonding.</p>	60	23-02-2023
Test-13	<p>General Studies and General Abilities-5: 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.</p>	30	06-03-2023

Test No	Name of the Test	Max Marks	Date of Activation
Test-14	Machining and Machine Tool Operations: Mechanics of Machining; Basic Machine Tools; Single and Multi-Point Cutting Tools, Tool Geometry and Materials, Tool Life and Tool Wear; Economics of Machining; Principles of Non-Traditional Machining Processes; Principles of Work Holding Devices, Principals of Jigs and Fixtures. Computer Integrated Manufacturing: Basic concepts of CAD/CAM and their integration tools.	60	08-03-2023
Test-15	General Studies and General Abilities-6: Current affairs – Regional, National and International. International Relations and Events.	30	13-03-2023
Test-16	Production Planning and Control: Forecasting Models, Aggregate Production Planning, Scheduling, Materials Requirement Planning. Inventory Control: Deterministic Models; Safety Stock Inventory Control Systems. Operations Research: Linear Programming, Simplex Method Transportation, Assignment, Simple Queuing Models, PERT and CPM.	60	15-03-2023
Test-17	General Studies and General Abilities-7: 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	31-03-2023
Test-19	Mock-1 PAPER-I (General Studies & General Abilities)	150	03-04-2023
Test-20	Mock-2 PAPER-II (Engineering Discipline)	300	14-04-2023
Test-21	Mock-2 PAPER-I (General Studies & General Abilities)	150	17-04-2023