APPSC
ASSISTANT EXECUTIVE ENGINEERS
Online Test Series

Civil Engineering - Schedule

No.of Tests : 40			
	Paper-I	**Paper-II**	**Paper-III**
Subject Wise Tests	**11**	**10**	**12**
Full Length Mock Tests	**2**	**2**	**3**

Note:

- ❖ The syllabus is based on the previous APPSC-AEE notification. ACE Engineering Academy does not take responsibility for any changes or deviations in the final APPSC-AEE examination syllabus.
- ❖ As per the previous APPSC-AEE notification, each question carries 1 mark and each wrong answer will be penalized with 1/3rd of the marks prescribed for the question.
- ❖ The test dates may change depending on the APPSC-AEE examination schedule.
- ❖ Tests will be activated at 6:00 PM on the scheduled day.
- ❖ All tests will remain active until the APPSC-AEE examination.
- ❖ The test series is available only in English medium.

Paper-II

Subject wise Tests

(No.of Questions: 30, Time duration: 30 Minutes and Marks: 30 M)

Test No	Name of the Test	Date of Activation
Test-14	**Strength of Material-1:** Forces, moments, Equilibrium; Applying the Equation of Equilibrium, Planar Trusses; Friction; Lifting machines, definitions, Law of machine, study of important lifting machines; virtual work principal.	25-06-2026
Test-15	**Fluid Mechanic and Machinery-1:** Fluid statics: Dimensions and units: physical properties of fluids-specific gravity, viscosity, and surface tension -vapour pressure and their influence on fluid motion-atmospheric, Pascal's law, gauge and vacuum pressures – Measurement of pressure-Piezometer, U-tube and differential manometers..Hydrostatics, Fluid forces on planes and curved surfaces, submerged and floating bodies, Buoyancy and stability. Fluid kinematics: description of flow pattern and types of fluid flows – Velocity and acceleration: convective, temporal, tangential and normal accelerations, control volume-basic principles of fluid flow, continuity equation for 3-D, 2-D, 1- D flow. Rotational and irrotational motion, Velocity potential, stream function, flow net.	27-06-2026
Test-16	**Strength of Material-2:** Simple Stresses & Strains: Elasticity and plasticity, Types of stresses & strains, Generalized Hooke's law – Stress–strain diagram for mild steel – Working stress –Factor of safety – Lateral strain, Poisson's ratio & volumetric strain – Elastic modulii & the relationship between them – Bars of varying section – composite bars –Temperature stresses. Strain energy – Resilience – Gradual, sudden, impact and shock loadings.	29-06-2026
Test-17	**Fluid Mechanic and Machinery-2:** Fluid dynamics: Surface and body forces – Euler's and Bernoulli's equations for flow along a stream line and its applications, momentum equation and its applications. Flow measurement devices – Gross measurement: Venturimeter, Orificemeter, Turbine flow meters, Rotameters; Pressure measurement: Pitot tubes, hot wire/film anemometer, their measurement principles and sources of errors; calibration. Hydrodynamic force of jets on stationary and moving flat, inclined, and curved vanes	01-07-2026
Test-18	**Strength of Material-3:** Shear Force (S.F) and Bending Moment (B.M): Definition of beam –Types of beams – Concept of shear force and bending moment – S.F and B.M for cantilever, simply supported and overhanging beams subjected to point loads, U.D.L., uniformly varying loads and combination of these loads – Point of contra flexure –Relation between S.F., B.M and rate of loading at a section of a beam. Flexural Stresses: Theory of simple bending – Assumptions – bending equation: Neutral axis – bending stresses – section modulus of different sections – Design of simple beam sections. Shear Stresses: Derivation of formula –Shear stress distribution across various beam sections	03-07-2026
Test-19	**Fluid Mechanic and Machinery-3:** Closed conduit flow: Reynolds experiment – Major and Minor losses in pipes-pipes in series and pipes in parallel-total energy line-hydraulic gradient line, water hammer. Boundary Layer Concepts: Definition, thicknesses, characteristics along thin plate, laminar and turbulent boundary layers boundary layer in transition, separation of boundary layer, submerged objects – Drag and lift.	05-07-2026

Test No	Name of the Test	Date of Activation
Test-20	**Strength of Material-4:** Principal Stresses and Strains: Stresses on an inclined section of a bar under axial loading – Compound stresses – Normal and tangential stresses on an inclined plane for biaxial stresses – Two perpendicular normal stresses accompanied by a state of simple shear –Mohr's circle of stresses –Principal stresses and strains – Analytical and graphical solutions. Different theories of Failure: Various theories of failure.	07-07-2026
Test-21	**Fluid Mechanic and Machinery-4:** Hydraulic Turbines: Classification of turbines, Heads and efficiencies, impulse and reaction turbines, Pelton wheel, Francis turbine and Kaplan turbine – working proportions, velocity diagrams, work done, efficiencies , hydraulic design – Draft tube theory-functions and efficiency. Performance of hydraulic turbines: Geometric similarity, Unit and specific quantities, characteristic curves, governing of turbines, selection of type of turbine, cavitation. Centrifugal pumps: Classification, working, work done – barometric head-loss and efficiencies, specific speed – Performance characteristic curves, NPSH. Selection of pumps and economic evaluation of pumping.	09-07-2026
Test-22	**Strength of Material-5:** Columns and struts – Euler's column theory – types of end conditions; critical load on the column – derivations – Rankin's formula for columns. Torsion of Circular Shafts: Theory of pure torsion – Torsion Equations: Assumptions made in the theory of pure torsion – Torsional moment of resistance – Polar section modulus – Power transmitted by shafts – Combined bending and torsion and end thrust. Springs-Helical and leaf springs. Thin & Thick Cylinders and Spherical shells: Thin seamless shells – formula for longitudinal and circumferential stresses and max shear stresses – hoop, longitudinal and volumetric strains – changes in diameter, and volume of thin shells.	11-07-2026
Test-23	**Fluid Mechanic and Machinery-5:** Hydraulic Directional Control – Check Valves, Shuttle Valves, two- three- and four-Way Directional Control Valves, Directional Control Valve Actuation. Hydraulic Pressure Control – Pressure Relief Valves, Unloading Valves, Pressure Reducing Valves, Sequence Valves, Counterbalance Valves, Pressure Compensated Pumps. Hydro Projects And Plant: Classification – Typical layouts – plant auxiliaries – plant operation, pumped storage plants. Hydro Electric Power Plant: Water power – Hydrological cycle / flow measurement – drainage area characteristics – Hydrographs – Storage and Pondage – Classification of dams and spill ways.	13-07-2026
Full Length Mock Tests *(No.of Questions: 150, Time duration: 150 Minutes and Marks: 150 M)*		
Test-24	Full Length Mock Test-1	20-07-2026
Test-25	Full Length Mock Test-2	27-07-2026

Paper-III

Subject wise Tests

(No.of Questions: 30, Time duration: 30 Minutes and Marks: 30 M)

Test No	Name of the Test	Date of Activation
Test-26	**Building Materials:** Timber: Different types and species of structural timber, density – moisture relationship, strength in different directions, defects, preservations, and plywood. Bricks: Types, Indian standard classification, absorption, saturation factor, strength in masonry, influence of mortar strength on masonry strength. Cement: Compounds of different types, setting times, strength. Cement mortar: Ingredients, proportions, water demand, mortars for plastering and masonry. Concrete: Importance of w/c ratio, strength, ingredients including admixtures, workability, testing for strength, mix design methods, non-destructive testing.	03-08-2026
Test-27	**Structural Analysis:** General theorems: theorems relating to elastic structures, principles of virtual work, strain energy in elastic structures, complementary energy, Castigliano's theorem, Betti's and Maxwell's reciprocal theorems. Analysis of determinate structures – Deflection of determinate beams by double integration Macaulay's moment area and conjugate beam methods, Analysis of indeterminate skeletal frames-Moment distribution, Slope deflection, Kani's, Stiffness and force methods, Energy methods, Plastic analysis of indeterminate beams and simple portal frames.	06-08-2026
Test-28	**Design of Steel Structures:** Principles of limit state method. Plastic sections, Design of bolted and welded connections, Design of tension, compression members and beams, axially and eccentrically loaded joints, Simple connection of bracket plates to columns, beam to beam and beam to column connections, design of framed, un-stiffened and stiffened seat connections. Design of industrial roofs. Principles of ultimate load design. Design of simple members.	09-08-2026
Test-29	**Design of Concrete and Masonry Structures:** Limit state design for bending, Shear, Axial compression and combined forces. Codal provision for slabs, Beams, Columns and footings. Principles of pre-stressed concrete design, Materials, Methods of pre-stressing, losses. Design of simple members and determinate structures. Design of brick masonry as per IS codes.	12-08-2026
Test-30	**Construction Planning and Management:** Bar chart, Linked bar chart, Work break down structures, Activity – on – arrow diagrams. Critical path, Probabilistic activity durations, Event based networks. PERT network: Time-cost study, Crashing, Resource allocation.	15-08-2026
Test-31	**Hydrology:** Hydrological cycle and its components, Precipitation and related data analysis, Evaporation and transpiration; S-hydrograph, Unit hydrographs. Floods and their management, Probable maximum Flood; Streams and their gauging; Routing of floods; Capacity of reservoirs.	18-08-2026

Test No	Name of the Test	Date of Activation
Test-32	**Hydrauics:** Open Channel flow: types of flows - Type of channels – Velocity distribution – Energy and momentum correction factors, uniform flow and calculation of uniform flow, most economical section, Specific energy, critical flow conditions, critical depth computation, Non-Uniform flow: Assumptions and Equation for Gradually varied flow, types of channel bottom slopes, classification of surface profiles. Rapidly varied flow, hydraulic jump, energy dissipation. Hydraulic Similitude: Dimensional analysis-Rayleigh's method and Buckingham's pi theorem- –Geometric, kinematic and dynamic similarities - dimensionless numbers – model and prototype relations. Distorted and non-distorted models.	21-08-2026
Test-33	**Irrigation:** Multipurpose uses of water; Soil-Plant-Water relationships, Irrigation systems, Water demand assessment; Storages and their yields, Ground water yield and well Hydraulics; Water logging, drainage design. Design of rigid boundary canals, Lacey's and tractive force concepts in canal design, Lining of Canals, Sediment transport in canals, Non-overflow and overflow section of gravity dams and their design, Energy dissipaters, tail water rating; Design of head works, Distribution works, Falls, Cross-drainage works, Outlets, River training.	24-08-2026
Test-34	**Environmental Engineering:** Water Supplying Engineering: Sources of supply, Yields, Design of intakes and conductors, Estimation of demand. Water quality standards, Control of water borne diseases. Primary and secondary treatment. Conveyance and distribution systems of treated water, Leakages and control. Rural water supply. Institutional and industrial water supply. Waste Water engineering: Urban rain water disposal, Systems of sewage collection and disposal. Design of sewers and sewerage systems, Pumping. Characteristics of sewage and its treatment. Disposal of products of sewage treatment. Plumbing systems. Rural and semiurban sanitation. Solid Waste Management: Sources and effects of air pollution, Monitoring of air pollution, Noise pollution, Standards, Ecological chain and balance. Environmental impact assessment.	27-08-2026
Test-35	**Soil Mechanics and Foundation Engineering:** Properties and classification of soil, Compaction, Permeability and Seepage, Flow nets, Compressibility and consolidation. Stress distribution in soils, Shearing resistance, Stresses and failure. Soil testing in laboratories and in-situ, Earth pressure theories, Soil exploration. Types of foundations, Selection criteria, bearing capacity, Settlement, laboratory and field tests, Design of shallow foundations. Types of piles and their design and layout. Foundations on expansive soils.	30-08-2026
Test-36	**Surveying:** Classification of surveys, Scales, Accuracy, Measurement of distances, Direct and indirect methods, Optical and electronic devices, Measurement of directions, Prismatic compass, Local attraction, Theodolites, Types, Measurement of elevations, Spirit and trigonometric leveling, Contours, Digital elevation modeling concept, Establishment of control by triangulations and traversing, Measurement and adjustment of observations, Computation of coordinates, Field astronomy, Concept of global positioning system, Map preparation by plane tabling and by photogrammetry, Remote sensing concepts, Map substitutes.	02-09-2026

Test No	Name of the Test	Date of Activation
Test-37	**Transport Engineering:** Planning of Highway systems, Alignment and geometric design, Horizontal and vertical curves, Grade separation, Highway Materials and construction methods for different surfaces and maintenance. Principles of pavement design, Drainage. Traffic surveys, Intersections, Signaling, Mass transit systems, Accessibility, Networking.	05-09-2026
Full Length Mock Tests *(No.of Questions: 150, Time duration: 150 Minutes and Marks: 150 M)*		
Test-38	Full Length Mock Test-1	14-09-2026
Test-39	Full Length Mock Test-2	21-09-2026
Test-40	Full Length Mock Test-3	28-09-2026