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TGPSC
ASSISTANT EXECUTIVE ENGINEERS
Online Test Series

Civil Engineering - Schedule

No.of Tests : 22 + 21 *free* practice tests of TGPSC-AEE-2022 OTS		
	TGPSC-AEE-2024	Practice Tests TGPSC-AEE-2022
Subject Wise Tests	18	17
Full Length Mock Tests	4	4
Total Tests - 43		

Note:

★ The Syllabus considered as per Previoues year Notification of TGPSC-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 TGPSC-AEE Exam schedule.

★ All Tests will be active till TGPSC-AEE Examination.

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

★Test series available in ENGLISH medium only.

Subject wise Tests

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

Test No	Name of the Test	Max Marks	Date of Activation
Test-01	**Fluid Mechanics and Hydraulics:** Fluid Properties; Measurement of Pressure - Manometers; Fluid Kinematics – Classification of Fluids, Stream function and Velocity potential, significance and use of Flownets, Fluid dynamics - Continuity equation, Bernoulli's equations and Impulse momentum equation; Laminar and Turbulent flow through pipes – significance of Reynolds number, Hagen – Poiseuille's equation, Darcy – Weisbach equation, Friction factor, Water hammer concepts; Compressible flow – Bernoulli's equation for Isothermal and Adiabatic conditions, Mach Number, Mach cone, stagnation properties; Steady uniform flow through open channels; Gradually varied flows – significance of Froude number, classification and computation of Flow profiles, Hydraulic jump, Surges; Boundary layer – Laminar and Turbulent Boundary layer, Boundary layer thickness, rough and smooth Boundaries, Boundary layer separation; Dimensional analysis and similarity laws; Hydraulic Turbines – classification, Velocity triangles, principles and design of reaction and impulse turbines; Centrifugal pumps – specific speed, work done and efficiency, characteristic curves.	60	06-11-2024
Test-02	**Strength of Materials:** Simple stresses and strains, elastic constants and relationship between them; Compound bars; Temperature stresses; Shear forces and bending moment diagrams for beams; Principal stresses and Mohr's circle of stress, Theory of bending and bending stresses; Shear stress distribution; Theory of torsion; Springs; Deflections of beams; Direct and bending stresses; Columns and struts; Thin and thick cylinders;; Analysis of trusses, Betti-Maxwell theorem; Shear centre and unsymmetrical bending.	60	11-11-2024
Test-03	**General Studies and General Abilities-1:** Society, Culture, Heritage, Arts and Literature of Telangana. Policies of Telangana State.	30	12-11-2024
Test-04	**Soil Mechanics and Foundation Engineering:** Soil Mechanics: Physical properties of soils, Classification and identification, Permeability, Capillarity, Seepage, Compaction, Consolidation, Shear Strength, Mohr's circle, Earth pressure, Slope stability; Foundation Engineering: Site investigations, stress distribution in soils, Bearing capacity, Settlement analysis, Types of Foundation, Pile foundations, Foundations on expansive soils; swelling and its preventions; Coffer dams, Caissons, Dewatering, Bracing for excavations, Newmark charts, machine foundations.	60	16-11-2024
Test-05	**Theory of Structures:** Strain energy method; Moving loads and influence lines; Arches and suspension bridges; Static and kinematic indeterminacy; Moment distribution, Slope deflection, and Kani's methods applied to continuous beams and portal frames; matrix methods of analysis.	60	21-11-2024
Test-06	**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.	30	22-11-2024
Test-07	**Transportation Engineering:** Highway Classification as per IRC; Highway alignment; Engineering Surveys; Geometric Design; Cross sectional elements of road; Gradient; Grade compensation; Traffic Surveys – speed, Volumes, origin and destination; Intersection – at grade and grade separated; Channelization; Rotary intersection; signal design – webstar method, traffic signs, pavement marking; Parking studies, accidental studies, pavement types, Factors considered for pavement design, flexible and rigid pavements design concepts. Railway Engineering: Permanent way, rails, sleepers, ballast; Creep, coning of wheel, rail fixtures and fastenings, super elevation, cant deficiency, curves, turnout; Points and crossings. Airport Engineering: Selection of site of Airport, runway orientation and design, wind rose diagram, basic run way length, correction to basic runway length.	60	26-11-2024
Test-08	**General Studies and General Abilities-3:** Physical, Social and Economic Geography of India. Physical, Social and Economic Geography and Demography of Telangana.	30	27-11-2024
Test-09	**Hydrology and Water Resources Engineering:** Hydrological cycle; Rainfall – types and measurement, network design; Infiltration - index; Runoff – process, factors and determination of runoff, dependable yield; Floods – flood hydrograph, computation of flood peak using rational formula, unit hydrograph method and Gumbel's extreme value methods; Groundwater – types of aquifer and properties, Darcy's law, specific yield, steady radial flow to wells in confined and unconfined aquifers; Irrigation – types and advantages, soil water plant relationship, consumptive use, duty, delta, base period, crops and their water requirements; Single and multipurpose projects; Dams – classification, forces and design of Gravity dam and Earth dam; Spillways – types, energy dissipation, stilling basin, Appurtenances; Canals – alignment, Kennedy's and Lacey's theories, lining of Canals; Weirs – components, design of vertical drop and sloping glacis weir; Seepage forces – Bligh's Theory, Khosla's theory; Canal falls – types and design principles; Cross drainage works – classification and design principles of aqueducts; Hydropower principles – classification and components of Hydroelectric power plants.	60	01-12-2024
Test-10	**General Studies and General Abilities-4:** General Science; India's Achievements in Science and Technology. Environmental issues; Disaster Management- Prevention and Mitigation Strategies.	30	02-12-2024

Test No	Name of the Test	Max Marks	Date of Activation
Test-11	**Environmental Engineering:** Water supply – objectives, rate of demand, population forecasts; Analysis of water – classification, design of coagulation, sedimentation, filtration, disinfection and softening processes; Methods of layout of distribution pipes – Hardy cross method; Waste water engineering – systems of sewerage, hydraulic formulae and design of sewers, BOD, COD, self purification of natural streams, methods of sewage disposal; Treatment of sewage – principles and design of grit chamber, sedimentation tanks, trickling filters, activated sludge process, sludge digestion tanks, septic tanks; Municipal solid waste – characteristics, collection and transportation of solid wastes; Air Pollution – types and sources of pollutants, air quality standards; Noise pollution – Impacts and permissible limits, measurement and control of noise pollution.	60	06-12-2024
Test-12	**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.	30	07-12-2024
Test-13	**Cement Concrete and Pre-Stressed Concrete:** Concrete Structures: Materials, permissible stresses and IS Specifications; Working stress methods; Limit State Method - Stress Blocks parameters, design of Beams, Slabs, Columns and Footing; Design for Shear and Torsion; Design of Retaining Walls, Water tanks, and T-Beam Slab bridges; Yield line theory Pre-Stressed Concrete: Basic concepts, material for pre-stressing, losses in Pre-stress, classification of pre-stressing system; Analysis of PSC Sections	60	11-12-2024
Test-14	**General Studies and General Abilities-6:** Current affairs – Regional, National and International. International Relations and Events.	30	12-12-2024
Test-15	**Building Materials and Construction & Estimation, Costing and Construction Management:** Bricks– Types of Bricks, Indian standard classification, properties; Stones – Types of stones, classification, properties, dressing and polishing of stones; Methods of Quarrying; Cement – Different grades and types of cement, properties and IS specifications; Aggregates – coarse and fine aggregate, properties and IS specifications; Cement Mortar – Proportions of cement mortar for various applications; Concrete – Constituents of Concrete, Different grades of Concrete, mix proportioning using IS Code, Properties of fresh and hardened Concrete; Admixtures – Types of Admixtures. Estimation, Costing and Construction Management: Abstract estimate: Detailed estimate – centerline, long & short wall method, various items of Civil Engineering works as per Indian Standard, General Specifications - Earth Work, Brick / Stone Masonry in Cement Mortar, RCC, Plastering in Cement Mortar, Floor finishes, white wash, colour wash; Standard schedule of rates, lead and lift, preparation of lead statement; Computation of earth work – Mid-ordinate, Mean Sectional area, Trepezoidal method, Prismoidal Rule; Approximate estimate – Plinth area and cubic rate estimate.	60	16-12-2024
Test-16	**Steel Structures & Engineering Geology:** Steel Structures: Properties of steel sections, permissible stresses, IS Specifications; Riveted and welded joints and connections; Design of simple and compound Beams and Columns, Column bases, Roof trusses, Plate and Gantry Girders; Plate Girder Lattice Girder Railway bridges, and Bearings. Plastic analysis. Engineering Geology: Mineralogy, Structural Geology, Groundwater Exploration methods; Engineering Geology applications for Tunnels, Dams and Reservoirs; Geological hazards and preventive measures	60	21-12-2024
Test-17	**General Studies and General Abilities-7:** Logical Reasoning; Analytical Ability and Data Interpretation. Basic English. (10th Class Standard)	30	22-12-2024
Test-18	**Surveying & Construction Management:** Surveying: Principle and classification of surveying, chain surveying; Compass surveying; Levelling and contouring; Theodolite surveying; curves; Introduction and Fundamental concepts of electronic measuring instruments – EDM, Total station, components of GPS and basics of GIS. Construction Management: Types of construction projects, Tendering and construction contracts, project planning and network analysis – PERT and CPM.	60	26-12-2024

Full Length Mock Test

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

Test No	Name of the Mock	Max Marks	Date of Activation
Test-19	Mock-1 PAPER-I (General Studies & General Abilities)	150	04-01-2025
Test-20	Mock-1 PAPER-II (Engineering Discipline)	300	05-01-2025
Test-21	Mock-2 PAPER-I (General Studies & General Abilities)	150	11-01-2025
Test-22	Mock-2 PAPER-II (Engineering Discipline)	300	12-01-2025

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Test-01	**Fluid Mechanics and Hydraulics:** Fluid Properties; Measurement of Pressure - Manometers; Fluid Kinematics – Classification of Fluids, Stream function and Velocity potential, significance and use of Flownets, Fluid dynamics - Continuity equation, Bernoulli's equations and Impulse momentum equation; Laminar and Turbulent flow through pipes – significance of Reynolds number, Hagen – Poiseuille's equation, Darcy – Weisbach equation, Friction factor, Water hammer concepts; Compressible flow – Bernoulli's equation for Isothermal and Adiabatic conditions, Mach Number, Mach cone, stagnation properties; Steady uniform flow through open channels; Gradually varied flows – significance of Froude number, classification and computation of Flow profiles, Hydraulic jump, Surges; Boundary layer – Laminar and Turbulent Boundary layer, Boundary layer thickness, rough and smooth Boundaries, Boundary layer separation; Dimensional analysis and similarity laws; Hydraulic Turbines – classification, Velocity triangles, principles and design of reaction and impulse turbines; Centrifugal pumps – specific speed, work done and efficiency, characteristic curves.	60	01-10-2024
Test-02	**Strength of Materials:** Simple stresses and strains, elastic constants and relationship between them; Compound bars; Temperature stresses; Shear forces and bending moment diagrams for beams; Principal stresses and Mohr's circle of stress, Theory of bending and bending stresses; Shear stress distribution; Theory of torsion; Springs; Deflections of beams; Direct and bending stresses; Columns and struts; Thin and thick cylinders;; Analysis of trusses, Betti-Maxwell theorem; Shear centre and unsymmetrical bending.	60	
Test-03	**General Studies and General Abilities-1:** Society, Culture, Heritage, Arts and Literature of Telangana. Policies of Telangana State.	30	
Test-04	**Soil Mechanics and Foundation Engineering:** Soil Mechanics: Physical properties of soils, Classification and identification, Permeability, Capillarity, Seepage, Compaction, Consolidation, Shear Strength, Mohr's circle, Earth pressure, Slope stability; Foundation Engineering: Site investigations, stress distribution in soils, Bearing capacity, Settlement analysis, Types of Foundation, Pile foundations, Foundations on expansive soils; swelling and its preventions; Coffer dams, Caissons, Dewatering, Bracing for excavations, Newmark charts, machine foundations.	60	
Test-05	**Theory of Structures:** Strain energy method; Moving loads and influence lines; Arches and suspension bridges; Static and kinematic indeterminacy; Moment distribution, Slope deflection, and Kani's methods applied to continuous beams and portal frames; matrix methods of analysis.	60	
Test-06	**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.	30	
Test-07	**Transportation Engineering & Surveying:** Highway Classification as per IRC; Highway alignment; Engineering Surveys; Geometric Design; Cross sectional elements of road; Gradient; Grade compensation; Traffic Surveys – speed, Volumes, origin and destination; Intersection – at grade and grade separated; Channelization; Rotary intersection; signal design – webstar method, traffic signs, pavement marking; Parking studies, accidental studies, pavement types, Factors considered for pavement design, flexible and rigid pavements design concepts. Railway Engineering: Permanent way, rails, sleepers, ballast; Creep, coning of wheel, rail fixtures and fastenings, super elevation, cant deficiency, curves, turnout; Points and crossings. Airport Engineering: Selection of site of Airport, runway orientation and design, wind rose diagram, basic run way length, correction to basic runway length. Surveying: Principle and classification of surveying, chain surveying; Compass surveying; Levelling and contouring; Theodolite surveying; curves; Introduction and Fundamental concepts of electronic measuring instruments – EDM, Total station, components of GPS and basics of GIS.	60	
Test-08	**General Studies and General Abilities-3:** Physical, Social and Economic Geography of India. Physical, Social and Economic Geography and Demography of Telangana.	30	
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Test-10	**General Studies and General Abilities-4:** General Science; India's Achievements in Science and Technology. Environmental issues; Disaster Management- Prevention and Mitigation Strategies.	30	01-10-2024
Test-11	**Environmental Engineering:** Water supply – objectives, rate of demand, population forecasts; Analysis of water – classification, design of coagulation, sedimentation, filtration, disinfection and softening processes; Methods of layout of distribution pipes – Hardy cross method; Waste water engineering – systems of sewerage, hydraulic formulae and design of sewers, BOD, COD, self purification of natural streams, methods of sewage disposal; Treatment of sewage – principles and design of grit chamber, sedimentation tanks, trickling filters, activated sludge process, sludge digestion tanks, septic tanks; Municipal solid waste – characteristics, collection and transportation of solid wastes; Air Pollution – types and sources of pollutants, air quality standards; Noise pollution – Impacts and permissible limits, measurement and control of noise pollution.	60	
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(No.of Questions: 150, Time duration: 150 Minutes)

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Test-20	Mock-1 PAPER-II (Engineering Discipline)	300	
Test-21	Mock-2 PAPER-I (General Studies & General Abilities)	150	
Test-22	Mock-2 PAPER-II (Engineering Discipline)	300	