

TOPIC WISE TESTS

- Each test carries 25 marks and 45 minutes duration
- Test consists of 5 one marks questions and 10 two marks questions

TEST No	TEST NAME : SYLLABUS	DATE OF ACTIVATION
CE-01	Basic Level Strength of Material -1 : Simple stresses and strains, SF & BM, Principal stress and strain, Bending and Shear Stresses.	Available Now
CE-02	Basic Level RCC-1 : Working stress, Limit state and Ultimate load design concepts; Design of beams, slabs	Available Now
CE-03	Basic Level Fluid Mechanics & Hydraulics Machines -1 : Fluid properties and manometer, hydrostatic force, Buoyancy and Floatation, Fluid Kinematics and Dynamics, Flow measurements, Laminar flow, flow in pipes	Available Now
CE-04	Basic Level Geo Technical-1 : Origin of soils, Definitions & Index properties of soil, soil classification, Permeability, Effective stress, Seepage pressure & Critical hydraulic Gradient, Seepage analysis, Stress distribution	Available Now
CE-05	Basic Level Environmental Engg-1 : Water demand, Water Quality, Plain Sedimentation, Coagulation, Filtration, Disinfection, Miscellaneous Treatment, Distribution System, Air Pollution.	Available Now
CE-06	Basic Level Transportation- 1 : Highway Geometric Design & Planning, Highway materials and testing, Pavement design, Traffic Engineering.	Available Now
CE-07	Basic Level Hydrology -1: Hydrologic cycle, precipitation, evaporation, evapo-transpiration, watershed, infiltration, unit hydrographs, hydrograph analysis, flood estimation and routing, reservoir capacity, reservoir and channel routing, surface run-off models, ground water hydrology - steady state well hydraulics and aquifers; Application of Darcy's law.	Available Now
CE-08	Basic Level Irrigation -1 : Duty, delta, estimation of evapo-transpiration; Crop water requirements; Design of lined and unlined canals, head works, gravity dams and spillways; Design of weirs on permeable foundation; Types of irrigation systems, irrigation methods; Water logging and drainage; Canal regulatory works, cross-drainage structures, outlets and escapes.	Available Now
CE-09	Basic Level Strength of Material -2 : Torsion, Column & Struts, slope & Deflection, Strain energy, Shear Centre, Propped and Fixed beam, Theory of failures	Available Now
CE-10	Basic Level Structure Analysis-1 : Statically determinate and indeterminate structures by force/ energy methods; Method of superposition; Analysis of trusses, arches, beams, cables and frames,	Available Now
CE-11	Basic Level Geo Technical -2 : Consolidation, Compaction, Shear strength, Earth pressure	Available Now

TEST No	TEST NAME : SYLLABUS	DATE OF ACTIVATION
CE-12	<p>Basic Level Surveying : Principles of surveying; Errors and their adjustment; Maps - scale, coordinate system; Distance and angle measurement - Levelling and trigonometric levelling; Traversing and triangulation survey; Total station; Horizontal and vertical curves.</p> <p>Photogrammetry - scale, flying height; Remote sensing - basics, platform and sensors, visual image interpretation; Basics of Geographical information system (GIS) and Geographical Positioning system (GPS).</p>	Available Now
CE-13	<p>Basic Level Engineering Mechanics & Construction Materials and Management : System of forces, free-body diagrams, equilibrium equations; Internal forces in structures; Friction and its applications; Kinematics of point mass and rigid body; Centre of mass; Euler's equations of motion; Impulse-momentum; Energy methods; Principles of virtual work. & Construction Materials: Structural steel - composition, material properties and behaviour; Concrete - constituents, mix design, short-term and long-term properties; Bricks and mortar; Timber; Bitumen. Construction Management: Types of construction projects; Tendering and construction contracts; Rate analysis and standard specifications; Cost estimation; Project planning and network analysis - PERT and CPM.</p>	Available Now
CE-14	<p>Basic Level Steel Structures - 1 : Working stress and Limit state design concepts; Design of tension and compression members;</p>	Available Now
CE-15	<p>Basic Level Structural Analysis - 2 : Displacement methods: Slope deflection and moment distribution methods; Influence lines; Stiffness and flexibility methods of structural analysis.</p>	Available Now
CE-16	<p>Basic Level RCC - 2 : Columns; Bond and development length; Prestressed concrete; Analysis of beam sections at transfer and service loads.</p>	Available Now
CE-17	<p>Basic Level Fluid Mechanics & Hydraulics Machines - 2 : Turbulent flow, Boundary layer, Drag and lift, Dimensional Analysis, open channel flow, Impact of Jets, Turbines and pumps</p>	Available Now
CE-18	<p>Basic Level Environmental Engineering - 2 : Design of Sewers, Characteristics of Waste water, Treatment of Sewage, Sludge digestion, Trickling Filters, Activated sludge process, Oxidation ponds, Disposing of the Sewage Effluents, Solid Waste Management, Noise Pollution.</p>	Available Now
CE-19	<p>Basic Level Geotechnical Engineering – 3 : Stability of slopes, Bearing capacity, Pile foundation, Soil exploration</p>	Available Now
CE-20	<p>Basic Level Airport and Railway Engineering : Geometric design of railway track; Airport runway length, taxiway and exit taxiway design.</p>	Available Now
CE-21	<p>Basic Level Steel Structures - 2 : Beams and beam- columns, column bases; Connections - simple and eccentric, beam-column connections, plate girders and trusses; Plastic analysis of beams and frames</p>	Available Now
CE-22	<p>Basic Level Engineering. Mathematics – 1 :</p> <p>Linear Algebra: Matrix Algebra, Systems of linear equations, Eigenvalues, Eigenvectors.</p> <p>Calculus: Mean value theorems, Theorems of integral calculus, Evaluation of definite and improper integrals, Partial Derivatives, Maxima and minima, Multiple integrals, Fourier series, Vector identities, Directional derivatives, Line integral, Surface integral, Volume integral, Stokes's theorem, Gauss's theorem, Green's theorem.</p> <p>Differential equations: First order equations (linear and nonlinear), Higher order linear differential equations with constant coefficients, Method of variation of parameters, Cauchy's equation, Euler's equation, Initial and boundary value problems, Partial Differential Equations, Method of separation of variables.</p>	Available Now

TEST No	TEST NAME : SYLLABUS	DATE OF ACTIVATION
CE-23	<p>Basic Level Engineering Mathematics – 2 :</p> <p>Complex variables: Analytic functions, Cauchy’s integral theorem, Cauchy’s integral formula, Taylor series, Laurent series, Residue theorem, Solution integrals.</p> <p>Probability and Statistics: Sampling theorems, Conditional probability, Mean, Median, Mode, Standard Deviation, Random variables, Discrete and Continuous distributions, Poisson distribution, Normal distribution, Binomial distribution, Correlation analysis, Regression analysis.</p> <p>Numerical Methods: Solutions of nonlinear algebraic equations, Single and Multi-step methods for differential equations.</p> <p>Transform Theory: Fourier Transform, Laplace Transform, z-Transform.</p>	Available Now
CE-24	Basic Level General Aptitude – 1 : English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction	Available Now
CE-25	Basic Level General Aptitude – 2 : Numerical computation, numerical estimation, numerical reasoning and data interpretation	Available Now
CE-26	Advance Level Steel Structures - 1 : Working stress and Limit state design concepts; Design of tension and compression members;	Available Now
CE-27	Advance Level Engineering Mechanics & Construction Materials and Management : System of forces, free-body diagrams, equilibrium equations; Internal forces in structures; Friction and its applications; Kinematics of point mass and rigid body; Centre of mass; Euler’s equations of motion; Impulse-momentum; Energy methods; Principles of virtual work. & Construction Materials: Structural steel - composition, material properties and behaviour; Concrete - constituents, mix design, short-term and long-term properties; Bricks and mortar; Timber; Bitumen. Construction Management: Types of construction projects; Tendering and construction contracts; Rate analysis and standard specifications; Cost estimation; Project planning and network analysis - PERT and CPM.	Available Now
CE-28	Advance Level Geotechnical Engineering – 1 : Origin of soils, Definitions & Index properties of soil, soil classification, Permeability, Effective stress, Seepage pressure & Critical hydraulic Gradient, Seepage analysis, Stress distribution.	Available Now
CE-29	Advance Level Strength of Materials – 1 : Simple stresses and strains, SF & BM, Principal stress and strain, Bending and Shear Stresses.	Available Now
CE-30	Advance Level Hydrology : Hydrologic cycle, precipitation, evaporation, evapo-transpiration, watershed, infiltration, unit hydrographs, hydrograph analysis, flood estimation and routing, reservoir capacity, reservoir and channel routing, surface run-off models, ground water hydrology - steady state well hydraulics and aquifers; Application of Darcy’s law.	Available Now
CE-31	Advance Level RCC – 1 : Working stress, Limit state and Ultimate load design concepts; Design of beams, slabs.	Available Now
CE-32	Advance Level Fluid Mechanics & Hydraulic Machines – 1 : Fluid properties and manometer, hydrostatic force, Buoyancy and Floatation, Fluid Kinematics and Dynamics, Flow measurements, Laminar flow, flow in pipes	Available Now
CE-33	Advance Level Structural Analysis - 1 : Statically determinate and indeterminate structures by force/ energy methods; Method of superposition; Analysis of trusses, arches, beams, cables and frames,	Available Now
CE-34	Advance Level Strength of Materials – 2 : Torsion, Column & Struts, slope & Deflection, Strain energy, Shear Centre, Propped and Fixed beam, Theory of failures.	Available Now

TEST No	TEST NAME : SYLLABUS	DATE OF ACTIVATION
CE-35	Advance Level Environmental Engineering - 1 : Water demand, Water Quality, Plain Sedimentation, Coagulation, Filtration, Disinfection, Miscellaneous Treatment, Distribution System, Air Pollution.	Available Now
CE-36	Advance Level Transportation Engineering : Highway Geometric Design & Planning, Highway materials and testing, Pavement design, Traffic Engineering	Available Now
CE-37	Advance Level Steel Structures - 2 : Beams and beam- columns, column bases; Connections - simple and eccentric, beam-column connections, plate girders and trusses; Plastic analysis of beams and frames	Available Now
CE-38	Advance Level Fluid Mechanics & Hydraulics Machines - 2 : Turbulent flow, Boundary layer, Drag and lift, Dimensional Analysis, open channel flow, Impact of Jets, Turbines and pumps	Available Now
CE-39	Advance Level Geotechnical Engineering - 2 : Consolidation, Compaction, Shear strength, Earth pressure	Available Now
CE-40	Advance Level RCC - 2 : Columns; Bond and development length; Prestressed concrete; Analysis of beam sections at transfer and service loads.	Available Now
CE-41	Advance Level Structural Analysis - 2 : Displacement methods: Slope deflection and moment distribution methods; Influence lines; Stiffness and flexibility methods of structural analysis.	Available Now
CE-42	Advance Level Geotechnical Engineering – 3 : Stability of slopes, Bearing capacity, Pile foundation, Soil exploration	Available Now
CE-43	Advance Level Environmental Engineering - 2 : Design of Sewers, Characteristics of Waste water, Treatment of Sewage, Sludge digestion, Trickling Filters, Activated sludge process, Oxidation ponds, Disposing of the Sewage Effluents, Solid Waste Management, Noise Pollution.	Available Now
CE-44	Advance Level Engg. Mathematics - 1 : Linear Algebra: Matrix Algebra, Systems of linear equations, Eigenvalues, Eigenvectors. Calculus: Mean value theorems, Theorems of integral calculus, Evaluation of definite and improper integrals, Partial Derivatives, Maxima and minima, Multiple integrals, Fourier series, Vector identities, Directional derivatives, Line integral, Surface integral, Volume integral, Stokes's theorem, Gauss's theorem, Green's theorem. Differential equations: First order equations (linear and nonlinear), Higher order linear differential equations with constant coefficients, Method of variation of parameters, Cauchy's equation, Euler's equation, Initial and boundary value problems, Partial Differential Equations, Method of separation of variables.	Available Now
CE-45	Advance Level Engg. Mathematics – 2 : Complex variables: Analytic functions, Cauchy's integral theorem, Cauchy's integral formula, Taylor series, Laurent series, Residue theorem, Solution integrals. Probability and Statistics: Sampling theorems, Conditional probability, Mean, Median, Mode, Standard Deviation, Random variables, Discrete and Continuous distributions, Poisson distribution, Normal distribution, Binomial distribution, Correlation analysis, Regression analysis. Numerical Methods: Solutions of nonlinear algebraic equations, Single and Multi-step methods for differential equations. Transform Theory: Fourier Transform, Laplace Transform, z-Transform.	Available Now
CE-46	Advance Level General Aptitude - 1 : English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction	Available Now
CE-47	Advance Level General Aptitude - 2 : Numerical computation, numerical estimation, numerical reasoning and data interpretation	Available Now

SUBJECT WISE TESTS

- Each test carries 50 marks and 90 minutes duration
- Test consists of 10 one mark questions and 20 two marks questions

TEST No	TEST NAME : SYLLABUS	DATE OF ACTIVATION
CE-48	Basic Level Strength of Materials : Bending moment and shear force in statically determinate beams; Simple stress and strain relationships; Theories of failures; Simple bending theory, flexural and shear stresses, shear centre; Uniform torsion, buckling of column, combined and direct bending stresses.	Available Now
CE-49	Basic Level Fluid Mechanics & Hydraulics Machines : Fluid properties and manometer, hydrostatic force, Buoyancy and Floatation, Fluid Kinematics and Dynamics, Flow measurements, Laminar flow, flow in pipes. Turbulent flow, Boundary layer, Drag and lift, Dimensional Analysis, open channel flow, Impact of Jets, Turbines and pumps	Available Now
CE-50	Basic Level RCC : Working stress, Limit state and Ultimate load design concepts; Design of beams, slabs, columns; Bond and development length; Prestressed concrete; Analysis of beam sections at transfer and service loads.	Available Now
CE-51	Basic Level Hydrology + Irrigation : Hydrology: Hydrologic cycle, precipitation, evaporation, evapo-transpiration, watershed, infiltration, unit hydrographs, hydrograph analysis, flood estimation and routing, reservoir capacity, reservoir and channel routing, surface run-off models, ground water hydrology - steady state well hydraulics and aquifers; Application of Darcy's law. Irrigation: Duty, delta, estimation of evapo-transpiration; Crop water requirements; Design of lined and unlined canals, head works, gravity dams and spillways; Design of weirs on permeable foundation; Types of irrigation systems, irrigation methods; Water logging and drainage; Canal regulatory works, cross-drainage structures, outlets and escapes	Available Now
CE-52	Basic Level Steel Structures: Working stress and Limit state design concepts; Design of tension and compression members, beams and beam- columns, column bases; Connections - simple and eccentric, beam-column connections, plate girders and trusses; Plastic analysis of beams and frames.	Available Now
CE-53	Basic Level Structural Analysis : Statically determinate and indeterminate structures by force/ energy methods; Method of superposition; Analysis of trusses, arches, beams, cables and frames; Displacement methods: Slope deflection and moment distribution methods; Influence lines; Stiffness and flexibility methods of structural analysis.	Available Now
CE-54	Basic Level Geotechnical Engineering : Soil Mechanics: Origin of soils, soil structure and fabric; Three-phase system and phase relationships, index properties; Unified and Indian standard soil classification system; Permeability - one dimensional flow, Darcy's law; Seepage through soils - two-dimensional flow, flow nets, uplift pressure, piping; Principle of effective stress, capillarity, seepage force and quicksand condition; Compaction in laboratory and field conditions; One-dimensional consolidation, time rate of consolidation; Mohr's circle, stress paths, effective and total shear strength parameters, characteristics of clays and sand. Foundation Engineering: Sub-surface investigations - scope, drilling bore holes, sampling, plate load test, standard penetration and cone penetration tests; Earth pressure theories - Rankine and Coulomb; Stability of slopes - finite and infinite slopes, method of slices and Bishop's method; Stress distribution in soils - Boussinesq's and Westergaard's theories, pressure bulbs; Shallow foundations - Terzaghi's and Meyerhoff's bearing capacity theories, effect of water table; Combined footing and raft foundation; Contact pressure; Settlement analysis in sands and clays; Deep foundations - types of piles,	Available Now

TEST NO	TEST NAME : SYLLABUS	DATE OF ACTIVATION
	dynamic and static formulae, load capacity of piles in sands and clays, pile load test, negative skin friction.	
CE-55	<p>Basic Level Environmental Engineering :</p> <p>Water and Waste Water: Quality standards, basic unit processes and operations for water treatment. Drinking water standards, water requirements, basic unit operations and unit processes for surface water treatment, distribution of water. Sewage and sewerage treatment, quantity and characteristics of wastewater. Primary, secondary and tertiary treatment of wastewater, effluent discharge standards. Domestic wastewater treatment, quantity of characteristics of domestic wastewater, primary and secondary treatment. Unit operations and unit processes of domestic wastewater, sludge disposal.</p> <p>Air Pollution: Types of pollutants, their sources and impacts, air pollution meteorology, air pollution control, air quality standards and limits.</p> <p>Municipal Solid Wastes: Characteristics, generation, collection and transportation of solid wastes, engineered systems for solid waste management (reuse/ recycle, energy recovery, treatment and disposal).</p> <p>Noise Pollution: Impacts of noise, permissible limits of noise pollution, measurement of noise and control of noise pollution.</p>	Available Now
CE-56	<p>Basic Level Transportation Engineering + Airport and Railway Engineering :</p> <p>Transportation Infrastructure: Highway alignment and engineering surveys; Geometric design of highways - cross-sectional elements, sight distances, horizontal and vertical alignments; Geometric design of railway track; Airport runway length, taxiway and exit taxiway design.</p> <p>Highway Pavements: Highway materials - desirable properties and quality control tests; Design of bituminous paving mixes; Design factors for flexible and rigid pavements; Design of flexible pavement using IRC: 37-2012; Design of rigid pavements using IRC: 58-2011; Distresses in concrete pavements.</p> <p>Traffic Engineering: Traffic studies on flow, speed, travel time - delay and O-D study, PCU, peak hour factor, parking study, accident study and analysis, statistical analysis of traffic data; Microscopic and macroscopic parameters of traffic flow, fundamental relationships; Control devices, signal design by Webster's method; Types of intersections and channelization; Highway capacity and level of service of rural highways and urban roads. Geometric design of railway track; Airport runway length, taxiway and exit taxiway design.</p>	Available Now
CE-57	<p>Basic Level Surveying + Engineering Mechanics & Construction Materials and Management :</p> <p>Principles of surveying; Errors and their adjustment; Maps - scale, coordinate system; Distance and angle measurement - Levelling and trigonometric levelling; Traversing and triangulation survey; Total station; Horizontal and vertical curves.</p> <p>Photogrammetry - scale, flying height; Remote sensing - basics, platform and sensors, visual image interpretation; Basics of Geographical information system (GIS) and Geographical Positioning system (GPS).</p> <p>Engineering Mechanics: System of forces, free-body diagrams, equilibrium equations; Internal forces in structures; Friction and its applications; Kinematics of point mass and rigid body; Centre of mass; Euler's equations of motion; Impulse-momentum; Energy methods; Principles of virtual work.</p> <p>Construction Materials and Management: Construction Materials: Structural steel - composition, material properties and behaviour; Concrete - constituents, mix design, short-term and long-term properties; Bricks and mortar; Timber; Bitumen. Construction Management: Types of construction projects; Tendering and construction contracts; Rate analysis and standard specifications; Cost estimation; Project planning and network analysis - PERT and CPM.</p>	Available Now

TEST No	TEST NAME : SYLLABUS	DATE OF ACTIVATION
CE-58	<p>Basic Level Engineering Mathematics:</p> <p>Linear Algebra: Matrix Algebra, Systems of linear equations, Eigenvalues, Eigenvectors.</p> <p>Calculus: Mean value theorems, Theorems of integral calculus, Evaluation of definite and improper integrals, Partial Derivatives, Maxima and minima, Multiple integrals, Fourier series, Vector identities, Directional derivatives, Line integral, Surface integral, Volume integral, Stokes's theorem, Gauss's theorem, Green's theorem.</p> <p>Differential equations: First order equations (linear and nonlinear), Higher order linear differential equations with constant coefficients, Method of variation of parameters, Cauchy's equation, Euler's equation, Initial and boundary value problems, Partial Differential Equations, Method of separation of variables.</p> <p>Complex variables: Analytic functions, Cauchy's integral theorem, Cauchy's integral formula, Taylor series, Laurent series, Residue theorem, Solution integrals.</p> <p>Probability and Statistics: Sampling theorems, Conditional probability, Mean, Median, Mode, Standard Deviation, Random variables, Discrete and Continuous distributions, Poisson distribution, Normal distribution, Binomial distribution, Correlation analysis, Regression analysis.</p> <p>Numerical Methods: Solutions of nonlinear algebraic equations, Single and Multi-step methods for differential equations.</p> <p>Transform Theory: Fourier Transform, Laplace Transform, z-Transform.</p>	Available Now
CE-59	<p>Basic Level General Aptitude : English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction, Numerical computation, numerical estimation, numerical reasoning and data interpretation</p>	Available Now
CE-60	<p>Advance Level Strength of Materials + RCC :</p> <p>Solid Mechanics: Bending moment and shear force in statically determinate beams; Simple stress and strain relationships; Theories of failures; Simple bending theory, flexural and shear stresses, shear centre; Uniform torsion, buckling of column, combined and direct bending stresses.</p> <p>Concrete Structures: Working stress, Limit state and Ultimate load design concepts; Design of beams, slabs, columns; Bond and development length; Prestressed concrete; Analysis of beam sections at transfer and service loads.</p>	Available Now
CE-61	<p>Advance Level Engineering Mechanics & Construction Materials and Management + Steel Structures + Structural Analysis :</p> <p>Engineering Mechanics: System of forces, free-body diagrams, equilibrium equations; Internal forces in structures; Friction and its applications; Kinematics of point mass and rigid body; Centre of mass; Euler's equations of motion; Impulse-momentum; Energy methods; Principles of virtual work.</p> <p>Construction Materials and Management: Construction Materials: Structural steel - composition, material properties and behaviour; Concrete - constituents, mix design, short-term and long-term properties; Bricks and mortar; Timber; Bitumen. Construction Management: Types of construction projects; Tendering and construction contracts; Rate analysis and standard specifications; Cost estimation; Project planning and network analysis - PERT and CPM.</p> <p>Steel Structures: Working stress and Limit state design concepts; Design of tension and compression members, beams and beam- columns, column bases; Connections - simple and eccentric, beam-column connections, plate girders and trusses; Plastic analysis of beams and frames.</p> <p>Structural Analysis: Statically determinate and indeterminate structures by force/ energy methods; Method of superposition; Analysis of trusses, arches, beams, cables and frames; Displacement methods: Slope deflection and moment distribution methods; Influence lines; Stiffness and flexibility methods of structural analysis.</p>	Available Now

TEST No	TEST NAME : SYLLABUS	DATE OF ACTIVATION
CE-62	<p>Advance Level Geotechnical Engineering + Fluid Mechanics & Hydraulics Machines:</p> <p>Soil Mechanics: Origin of soils, soil structure and fabric; Three-phase system and phase relationships, index properties; Unified and Indian standard soil classification system; Permeability - one dimensional flow, Darcy's law; Seepage through soils - two-dimensional flow, flow nets, uplift pressure, piping; Principle of effective stress, capillarity, seepage force and quicksand condition; Compaction in laboratory and field conditions; One-dimensional consolidation, time rate of consolidation; Mohr's circle, stress paths, effective and total shear strength parameters, characteristics of clays and sand.</p> <p>Foundation Engineering: Sub-surface investigations - scope, drilling bore holes, sampling, plate load test, standard penetration and cone penetration tests; Earth pressure theories - Rankine and Coulomb; Stability of slopes - finite and infinite slopes, method of slices and Bishop's method; Stress distribution in soils - Boussinesq's and Westergaard's theories, pressure bulbs; Shallow foundations - Terzaghi's and Meyerhoff's bearing capacity theories, effect of water table; Combined footing and raft foundation; Contact pressure; Settlement analysis in sands and clays; Deep foundations - types of piles, dynamic and static formulae, load capacity of piles in sands and clays, pile load test, negative skin friction.</p> <p>Fluid Mechanics: Properties of fluids, fluid statics; Continuity, momentum, energy and corresponding equations; Potential flow, applications of momentum and energy equations; Laminar and turbulent flow; Flow in pipes, pipe networks; Concept of boundary layer and its growth.</p> <p>Turbulent flow, Boundary layer, Drag and lift, Dimensional Analysis, open channel flow, Impact of Jets, Turbines and pumps.</p>	Available Now
CE-63	<p>Advance Level Hydrology + Irrigation + Surveying:</p> <p>Hydrology: Hydrologic cycle, precipitation, evaporation, evapo-transpiration, watershed, infiltration, unit hydrographs, hydrograph analysis, flood estimation and routing, reservoir capacity, reservoir and channel routing, surface run-off models, ground water hydrology - steady state well hydraulics and aquifers; Application of Darcy's law.</p> <p>Irrigation: Duty, delta, estimation of evapo-transpiration; Crop water requirements; Design of lined and unlined canals, head works, gravity dams and spillways; Design of weirs on permeable foundation; Types of irrigation systems, irrigation methods; Water logging and drainage; Canal regulatory works, cross-drainage structures, outlets and escapes</p> <p>Surveying : Principles of surveying; Errors and their adjustment; Maps - scale, coordinate system; Distance and angle measurement - Levelling and trigonometric levelling; Traversing and triangulation survey; Total station; Horizontal and vertical curves.</p> <p>Photogrammetry - scale, flying height; Remote sensing - basics, platform and sensors, visual image interpretation; Basics of Geographical information system (GIS) and Geographical Positioning system (GPS).</p>	Available Now
CE-64	<p>Advance Level Environmental Engineering + Transportation Engineering:</p> <p>Water and Waste Water: Quality standards, basic unit processes and operations for water treatment. Drinking water standards, water requirements, basic unit operations and unit processes for surface water treatment, distribution of water. Sewage and sewerage treatment, quantity and characteristics of wastewater. Primary, secondary and tertiary treatment of wastewater, effluent discharge standards. Domestic wastewater treatment, quantity of characteristics of domestic wastewater, primary and secondary treatment. Unit operations and unit processes of domestic wastewater, sludge disposal.</p> <p>Air Pollution: Types of pollutants, their sources and impacts, air pollution meteorology, air pollution control, air quality standards and limits.</p>	Available Now

TEST NO	TEST NAME : SYLLABUS	DATE OF ACTIVATION
	<p>Municipal Solid Wastes: Characteristics, generation, collection and transportation of solid wastes, engineered systems for solid waste management (reuse/ recycle, energy recovery, treatment and disposal).</p> <p>Noise Pollution: Impacts of noise, permissible limits of noise pollution, measurement of noise and control of noise pollution.</p> <p>Transportation Infrastructure: Highway alignment and engineering surveys; Geometric design of highways - cross-sectional elements, sight distances, horizontal and vertical alignments; Geometric design of railway track; Airport runway length, taxiway and exit taxiway design.</p> <p>Highway Pavements: Highway materials - desirable properties and quality control tests; Design of bituminous paving mixes; Design factors for flexible and rigid pavements; Design of flexible pavement using IRC: 37-2012; Design of rigid pavements using IRC: 58-2011; Distresses in concrete pavements.</p> <p>Traffic Engineering: Traffic studies on flow, speed, travel time - delay and O-D study, PCU, peak hour factor, parking study, accident study and analysis, statistical analysis of traffic data; Microscopic and macroscopic parameters of traffic flow, fundamental relationships; Control devices, signal design by Webster's method; Types of intersections and channelization; Highway capacity and level of service of rural highways and urban roads.</p>	
CE-65	<p>Advance Level Engineering Mathematics:</p> <p>Linear Algebra: Matrix Algebra, Systems of linear equations, Eigenvalues, Eigenvectors.</p> <p>Calculus: Mean value theorems, Theorems of integral calculus, Evaluation of definite and improper integrals, Partial Derivatives, Maxima and minima, Multiple integrals, Fourier series, Vector identities, Directional derivatives, Line integral, Surface integral, Volume integral, Stokes's theorem, Gauss's theorem, Green's theorem.</p> <p>Differential equations: First order equations (linear and nonlinear), Higher order linear differential equations with constant coefficients, Method of variation of parameters, Cauchy's equation, Euler's equation, Initial and boundary value problems, Partial Differential Equations, Method of separation of variables.</p> <p>Complex variables: Analytic functions, Cauchy's integral theorem, Cauchy's integral formula, Taylor series, Laurent series, Residue theorem, Solution integrals.</p> <p>Probability and Statistics: Sampling theorems, Conditional probability, Mean, Median, Mode, Standard Deviation, Random variables, Discrete and Continuous distributions, Poisson distribution, Normal distribution, Binomial distribution, Correlation analysis, Regression analysis.</p> <p>Numerical Methods: Solutions of nonlinear algebraic equations, Single and Multi-step methods for differential equations.</p> <p>Transform Theory: Fourier Transform, Laplace Transform, z-Transform.</p>	Available Now
CE-66	<p>Advance Level General Aptitude : English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction, Numerical computation, numerical estimation, numerical reasoning and data interpretation</p>	Available Now
CE-67	<p>Hydrology + Irrigation + Surveying :</p> <p>Hydrology: Hydrologic cycle, precipitation, evaporation, evapo-transpiration, watershed, infiltration, unit hydrographs, hydrograph analysis, flood estimation and routing, reservoir capacity, reservoir and channel routing, surface run-off models, ground water hydrology - steady state well hydraulics and aquifers; Application of Darcy's law.</p> <p>Irrigation: Duty, delta, estimation of evapo-transpiration; Crop water requirements; Design of lined and unlined canals, head works, gravity dams and spillways; Design of weirs on permeable foundation; Types of irrigation systems, irrigation methods; Water logging and drainage; Canal regulatory works, cross-drainage structures, outlets and escapes</p> <p>Surveying : Principles of surveying; Errors and their adjustment; Maps - scale, coordinate system; Distance and angle measurement - Levelling and trigonometric</p>	Available Now

TEST No	TEST NAME : SYLLABUS	DATE OF ACTIVATION
	levelling; Traversing and triangulation survey; Total station; Horizontal and vertical curves. Photogrammetry - scale, flying height; Remote sensing - basics, platform and sensors, visual image interpretation; Basics of Geographical information system (GIS) and Geographical Positioning system (GPS).	
CE-68	<p>Fluid Mechanics & Hydraulics Machines + Environmental Engineering :</p> <p>Fluid properties and manometer, hydrostatic force, Buoyancy and Floatation, Fluid Kinematics and Dynamics, Flow measurements, Laminar flow, flow in pipes. Turbulent flow, Boundary layer, Drag and lift, Dimensional Analysis, open channel flow, Impact of Jets, Turbines and pumps</p> <p>Water and Waste Water: Quality standards, basic unit processes and operations for water treatment. Drinking water standards, water requirements, basic unit operations and unit processes for surface water treatment, distribution of water. Sewage and sewerage treatment, quantity and characteristics of wastewater. Primary, secondary and tertiary treatment of wastewater, effluent discharge standards. Domestic wastewater treatment, quantity of characteristics of domestic wastewater, primary and secondary treatment. Unit operations and unit processes of domestic wastewater, sludge disposal.</p> <p>Air Pollution: Types of pollutants, their sources and impacts, air pollution meteorology, air pollution control, air quality standards and limits.</p> <p>Municipal Solid Wastes: Characteristics, generation, collection and transportation of solid wastes, engineered systems for solid waste management (reuse/ recycle, energy recovery, treatment and disposal).</p> <p>Noise Pollution: Impacts of noise, permissible limits of noise pollution, measurement of noise and control of noise pollution.</p>	Available Now
CE-69	<p>Geotechnical Engineering + Transportation Engineering:</p> <p>Soil Mechanics: Origin of soils, soil structure and fabric; Three-phase system and phase relationships, index properties; Unified and Indian standard soil classification system; Permeability - one dimensional flow, Darcy's law; Seepage through soils - two-dimensional flow, flow nets, uplift pressure, piping; Principle of effective stress, capillarity, seepage force and quicksand condition; Compaction in laboratory and field conditions; One-dimensional consolidation, time rate of consolidation; Mohr's circle, stress paths, effective and total shear strength parameters, characteristics of clays and sand.</p> <p>Foundation Engineering: Sub-surface investigations - scope, drilling bore holes, sampling, plate load test, standard penetration and cone penetration tests; Earth pressure theories - Rankine and Coulomb; Stability of slopes - finite and infinite slopes, method of slices and Bishop's method; Stress distribution in soils - Boussinesq's and Westergaard's theories, pressure bulbs; Shallow foundations - Terzaghi's and Meyerhoff's bearing capacity theories, effect of water table; Combined footing and raft foundation; Contact pressure; Settlement analysis in sands and clays; Deep foundations - types of piles, dynamic and static formulae, load capacity of piles in sands and clays, pile load test, negative skin friction.</p> <p>Transportation Infrastructure: Highway alignment and engineering surveys; Geometric design of highways - cross-sectional elements, sight distances, horizontal and vertical alignments; Geometric design of railway track; Airport runway length, taxiway and exit taxiway design.</p> <p>Highway Pavements: Highway materials - desirable properties and quality control tests; Design of bituminous paving mixes; Design factors for flexible and rigid pavements; Design of flexible pavement using IRC: 37-2012; Design of rigid pavements using IRC: 58-2011; Distresses in concrete pavements.</p> <p>Traffic Engineering: Traffic studies on flow, speed, travel time - delay and O-D study, PCU, peak hour factor, parking study, accident study and analysis, statistical analysis of</p>	Available Now

TEST NO	TEST NAME : SYLLABUS	DATE OF ACTIVATION
	traffic data; Microscopic and macroscopic parameters of traffic flow, fundamental relationships; Control devices, signal design by Webster's method; Types of intersections and channelization; Highway capacity and level of service of rural highways and urban roads.	
CE-70	<p>Strength of Materials + Steel Structures + Engineering Mechanics & Construction Materials and Management:</p> <p>Solid Mechanics: Bending moment and shear force in statically determinate beams; Simple stress and strain relationships; Theories of failures; Simple bending theory, flexural and shear stresses, shear centre; Uniform torsion, buckling of column, combined and direct bending stresses.</p> <p>Steel Structures: Working stress and Limit state design concepts; Design of tension and compression members, beams and beam- columns, column bases; Connections - simple and eccentric, beam-column connections, plate girders and trusses; Plastic analysis of beams and frames.</p> <p>Engineering Mechanics: System of forces, free-body diagrams, equilibrium equations; Internal forces in structures; Friction and its applications; Kinematics of point mass and rigid body; Centre of mass; Euler's equations of motion; Impulse-momentum; Energy methods; Principles of virtual work.</p> <p>Construction Materials and Management: Construction Materials: Structural steel - composition, material properties and behaviour; Concrete - constituents, mix design, short-term and long-term properties; Bricks and mortar; Timber; Bitumen. Construction Management: Types of construction projects; Tendering and construction contracts; Rate analysis and standard specifications; Cost estimation; Project planning and network analysis - PERT and CPM</p>	Available Now
CE-71	<p>Structural Analysis + RCC :</p> <p>Structural Analysis: Statically determinate and indeterminate structures by force/ energy methods; Method of superposition; Analysis of trusses, arches, beams, cables and frames; Displacement methods: Slope deflection and moment distribution methods; Influence lines; Stiffness and flexibility methods of structural analysis.</p> <p>Concrete Structures: Working stress, Limit state and Ultimate load design concepts; Design of beams, slabs, columns; Bond and development length; Prestressed concrete; Analysis of beam sections at transfer and service loads.</p>	Available Now
CE-72	<p>Engineering Mathematics :</p> <p>Linear Algebra: Matrix Algebra, Systems of linear equations, Eigenvalues, Eigenvectors.</p> <p>Calculus: Mean value theorems, Theorems of integral calculus, Evaluation of definite and improper integrals, Partial Derivatives, Maxima and minima, Multiple integrals, Fourier series, Vector identities, Directional derivatives, Line integral, Surface integral, Volume integral, Stokes's theorem, Gauss's theorem, Green's theorem.</p> <p>Differential equations: First order equations (linear and nonlinear), Higher order linear differential equations with constant coefficients, Method of variation of parameters, Cauchy's equation, Euler's equation, Initial and boundary value problems, Partial Differential Equations, Method of separation of variables.</p> <p>Complex variables: Analytic functions, Cauchy's integral theorem, Cauchy's integral formula, Taylor series, Laurent series, Residue theorem, Solution integrals.</p> <p>Probability and Statistics: Sampling theorems, Conditional probability, Mean, Median, Mode, Standard Deviation, Random variables, Discrete and Continuous distributions, Poisson distribution, Normal distribution, Binomial distribution, Correlation analysis, Regression analysis.</p> <p>Numerical Methods: Solutions of nonlinear algebraic equations, Single and Multi-step methods for differential equations.</p> <p>Transform Theory: Fourier Transform, Laplace Transform, z-Transform.</p>	Available Now
CE-73	General Aptitude : English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction, Numerical computation, numerical estimation, numerical reasoning and data interpretation.	Available Now

MOCK TESTS

➤ Each test carries 100 marks and 3 hours duration.

TEST No	TEST NAME	DATE OF ACTIVATION
CE-74	Full Syllabus Test - 1 (Basic Level)	Available Now
CE-75	Full Syllabus Test - 2 (Basic Level)	Available Now
CE-76	Full Syllabus Test - 3 (Basic Level)	Available Now
CE-77	Full Syllabus Test - 1 (Advance Level)	Available Now
CE-78	Full Syllabus Test - 2 (Advance Level)	Available Now
CE-79	Full Syllabus Test - 3 (Advance Level)	Available Now
CE-80	GATE MOCK TEST - 1	Available Now
CE-81	GATE MOCK TEST - 2	Available Now
CE-82	GATE MOCK TEST - 3	Available Now
CE-83	GATE MOCK TEST - 4	Available Now
CE-84	GATE MOCK TEST - 5	Available Now
CE-85	GATE MOCK TEST - 6	Available Now

MSQ TYPE TESTS (Subject Wise)

➤ Each test carries 40 marks and 60 Minutes duration

TEST No	TEST NAME	DATE OF ACTIVATION
CE-86	General Aptitude	Available Now