

SYLLABUS FOR THE POST OF ESTATE OFFICER

Post Specific (80%)

Construction Material and Building Construction: Practical aspect of building Stones Bricks & Tiles, Cement, Timber and Wood Based Products, Paints and Varnishes, Metals. Building and their classification functional components and requirements of a building loads on a structure, Foundations, Walls, Brick Masonry, Stone Masonry, Wall, Arches and Lintels, Mortar & Concrete, Doors, Windows and Ventilators, Roof, Floors, Stairs, Damp Proofing and Water Proofing, Plastering and Pointing, Earthquakes and Earthquake resistant structures etc., Civil Engineering Drawings and Measurements.

Concrete And Structures: Properties of Concrete, Concrete Mix Design, chemicals and minerals Admixtures, ordinary and special concrete, Concrete Operation, Placement, Compaction and Curing of concrete, Non Destructive Tests.

Reinforced Concrete Structures: Reinforcement, RCC Beams, RCC Slabs, Reinforced Brick Works and Columns, Column & Wall Footing, IS code specifications

Steel Structures: Practical aspect of structural Steel Sections, Bolted & welded Connections, Roof Trusses, IS code specifications

Transportation Engineering: Practical Aspect of Material, Rigid & Flexible Pavements, road Drainage and Maintenance, Footpath maintenance

Estimation And Costing: Estimation and Types of estimation, Analysis of Rates, Building and Road Work Estimation and Valuation, Tendering Process and CPWD norms.

Water Supply & Waste Water Engineering: Quality & Quantity of Water, Water Treatment, Laying of Pipes, Building Water Supply, Sewerage System, Laying and Construction of Sewers, Sewage Characteristics, Sewerage Disposal & Treatment, Building Drainage.

Construction and Maintenance Management: Construction Planning, Scheduling & management, Site Organization, Construction Labour, Control of Progress, Practical Aspect of Inspection and Quality Control during construction, site selection, foundation etc. Accidents and Safety in Construction, Public Work Accounts

Town Planning: Land use planning, building bye-laws, NBC -2016

Infrastructure – Green Building: Griha Standards, Water Supply: Rain Water Harvesting, Percolating well, Water Conservation System, etc., Sanitary Engineering: Grey water recycling/portable & small scale sewage Treatment Plant (STP) and dual flushing system. Solid Waste management: Dustbin Provision (Dry & Wet Waste segregation), Organic Waste Converter; Solar energy and Energy efficient Buildings.

Basic Knowledge of Refrigeration and Air Conditioning: Basic concepts and principles of refrigeration: Refrigeration methods. Air refrigeration cycle, vapour compression cycle, simple vapour absorption cycle, their applications and limitations. Refrigerants: Important properties of refrigerants, properties and applications of commonly used refrigerants such as R11, R12, R22, NH3 etc

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Basic knowledge of Electrical Engg.: DC Circuits – Ohm's law, Kirchhoff's law, Electromagnetic induction – Faraday's laws, Single phase and Three phase circuits, Real and Reactive Power, Power factor, Measurement of electrical quantities like voltage, current, power and energy and frequency. AC machines – induction motors, synchronous generators, synchronous speed, frequency of generated voltage, Domestic wiring, service mains, meter board and distribution board, fuse and miniature circuit breakers. Precaution against electric shock.

Computer awareness (10%)

Components of a computer system, specifications of a computer system, Input and output devices and installation of printers and other input output devices., Introduction to Internet and Internet Applications, MS windows, MS-Word, MS-Excel, MS Power Point, MS Access, Computer Networking, Computer shortcut keys, Virus and virus protection, Operating System types.

English Language Proficiency (10%)

English language based on CBSE syllabus

