

SSC JE Syllabus, SSC Junior Engineer Exam Syllabus PDF

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The SSC JE (Staff Selection Commission Junior Engineer) examination is conducted for the recruitment of Junior Engineers in various government departments. The examination consists of two papers – Paper-I and Paper-II. Here's a detailed syllabus for each paper:

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Paper 1 of SSC JE Syllabus, SSC Junior Engineer Exam Syllabus PDF

Paper I is an objective-type paper that tests the candidate's general engineering knowledge. It consists of three parts:

General Intelligence and Reasoning:

- Analogies
- Similarities
- Differences
- Space Visualization
- Problem Solving
- Analysis
- Judgment
- Decision Making
- Visual Memory
- Discrimination
- Observation
- Relationship Concepts
- Arithmetical Reasoning
- Verbal and Figure Classification
- Arithmetical Number Series
- Non-verbal Series
- Abstract Ideas and Symbols and their Relationships
- Arithmetical Computations
- Other Analytical Functions

General Awareness:

- Current Events – National & International
- Indian History
- Indian Geography
- Indian Polity
- Indian Economy
- Constitution of India
- Culture & Heritage
- Science & Technology
- Books & Authors
- Sports & Games
- Awards & Honors
- Famous Personalities
- Important Days
- International & National Organizations

General Engineering (Civil and Structural, Electrical, and Mechanical):

1. Civil and Structural Engineering:

- Building Materials
- Estimating, Costing, and Valuation
- Surveying
- Soil Mechanics
- Hydraulics
- Irrigation Engineering
- Transportation Engineering
- Environmental Engineering
- Structural Engineering
- Theory of Structures
- Concrete Technology
- RCC Design
- Steel Design

2. Electrical Engineering:

- Basic Concepts
- Circuit Law
- Magnetic Circuit
- AC Fundamentals
- Measurement and Measuring Instruments
- Electrical Machines
- Synchronous Machines
- Generation, Transmission, and Distribution of Electrical Energy
- Estimation and Costing
- Utilization of Electrical Energy
- Basic Electronics

3. Mechanical Engineering:

- Theory of Machines and Machine Design
- Engineering Mechanics and Strength of Materials
- Properties of Pure Substances
- 1st Law of Thermodynamics
- 2nd Law of Thermodynamics
- Air standard Cycles for IC Engines
- IC Engine Performance
- IC Engines Combustion
- IC Engine Cooling & Lubrication
- Rankine cycle of System
- Boilers
- Classification
- Specification
- Fitting & Accessories
- Air Compressors & their cycles
- Refrigeration cycles
- Principle of Refrigeration Plant
- Nozzles & Steam Turbines

Paper 2 of SSC JE Syllabus, SSC Junior Engineer Exam Syllabus

Paper-II is a conventional-type paper that tests the candidate's specific engineering knowledge related to their branch of engineering. Candidates have to choose one of the following disciplines:

1. Civil and Structural Engineering:

- Building Materials and Constructions
- Estimating, Costing, and Valuation
- Surveying
- Soil Mechanics
- Hydraulics
- Irrigation Engineering
- Transportation Engineering
- Environmental Engineering
- Structural Engineering
- Theory of Structures
- Concrete Technology
- RCC Design
- Steel Design

2. Electrical Engineering:

- Electrical Machines
- Basic Concepts
- Circuit Law
- Magnetic Circuit
- AC Fundamentals
- Measurement and Measuring Instruments
- Synchronous Machines
- Generation, Transmission, and Distribution of Electrical Energy
- Estimation and Costing
- Utilization of Electrical Energy
- Basic Electronics

3. Mechanical Engineering:

- Theory of Machines and Machine Design
- Engineering Mechanics and Strength of Materials
- Properties of Pure Substances
- 1st Law of Thermodynamics
- 2nd Law of Thermodynamics
- Air standard Cycles for IC Engines
- IC Engine Performance
- IC Engines Combustion
- IC Engine Cooling & Lubrication
- Rankine cycle of System
- Boilers
- Classification
- Specification
- Fitting & Accessories
- Air Compressors & their cycles
- Refrigeration cycles
- Principle of Refrigeration Plant
- Nozzles & Steam Turbines

Candidates should refer to the official SSC JE notification for the specific year they are applying for to get the most up-to-date information regarding the syllabus and other important details related to the examination.