

# RRB JE SYLLABUS

## Railway Recruitment Board – Junior Engineer Syllabus

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### Non-Technical Section

#### Reasoning

- Number Series, Input-Output, syllogism, Coding-decoding.
- Word Building, Clock, Seating arrangement, Calendar.
- Decision making, Direction sense test, visual memory, Blood relations, figural classification and arithmetical reasoning.
- Similarities and differences, space visualization /orientation, analogy.
- Coding & Decoding, Arithmetic number series, non-verbal series, Statement conclusion.

#### General Awareness

- General Awareness on Railway.
- New Technologies & Reform in Indian Railway.
- Rail Budget.
- Indian – History, Geography, Polity, Economy Current Affairs, Sports, etc.

#### Aptitude

- Algebra.
- Ratio & Proportion.
- Interests.
- percentage
- Profit & loss.
- Time and distance /work.

- Pipes & Cisterns.
- Age problems.
- Mensuration.
- Data Interpretation.

## Technical Section

### Electronics Engineering

- Electronic Devices.
- Wireless Communication.
- Carrier transport in silicon: diffusion current, drift current, mobility, and resistivity.
- Energy bands.
- Signal & Systems.
- Generation and recombination of carriers.
- Tunnel.
- Control System.
- Junctions.
- Diodes.
- EMFT.
- Analog and Digital Circuits.
- Communication.
- Basics of Signal & Systems.

### Electrical Engineering

- Machines.
- Electrical and Electronic Measurements.
- Basics of Circuit & Power Electronics.

- Analog & Digital Electronics.
- Signals & Systems.
- Power & Control Systems.
- Circuits & Measurement Systems, etc.

## **Computer Science and Engineering**

- Computer Fundamentals.
- Languages.
- MS Office.
- Information systems.
- Software Engineering.
- DBMS.
- Operating systems.
- Computer Networks.
- Web technology & programming.
- Network communication.
- Database.
- Algorithms.
- System programming.

## **Mechanical Engineering**

- The Strength of Materials.
- Fluid Mechanics.
- Heat Transfer.
- Theory of Machines.
- Kinematics of Machine.
- Engineering Mechanics.
- Machining and Machine Tool Operations.

- Thermodynamics.
- Power Engineering.
- I.C. Engines cycles.
- Casting.
- Steam Tables.
- Thermodynamics cycles.
- Metrology and Inspection.

## **Civil Engineering**

- Estimating.
- Costing.
- General Civil Engineering.
- Construction / Structure Engineering and drawing.
- Valuation.
- Soil Mechanics.
- Structural Analysis.
- Building Materials.
- Mechanics.
- Concrete Structures.
- Steel Structures.
- Construction.
- Water requirements.
- Hydraulics & Hydrology.
- Highway Planning.
- Traffic Engineering.
- Projections.
- Errors and adjustments.

- Environmental Engineering
- Surveying.
- Coordinate system.
- Curves.
- Measurements of distance and directions.

## **Instrumentation & Measurement Engineering**

- Basics of Measurement Systems.
- Mechanical Measurement.
- Transducers.
- Analog /Digital Electronics.
- Circuits.
- Industrial Instrumentation.
- Process Instrumentation.

Check official website of RRB [www.indianrailways.gov.in](http://www.indianrailways.gov.in) for more details.