

Railway RRB Technician Exam Syllabus (CEN 02/2025): Detailed Section-Wise Guide

The Railway Recruitment Board (RRB) outlines a structured selection process for the Pay Level-5 position of **Technician Gr I Signal**. The primary screening is conducted via a Computer Based Test (CBT). To ensure a clear understanding of the examination blueprint and topics, here is the comprehensive rewritten guide designed to be highly accessible and optimized.

Exam Pattern & Evaluation Criteria

The CBT serves as the primary evaluation metric for shortlisting candidates for subsequent recruitment phases. The core structure of the examination includes the following parameters:

- **Duration:** The total time allocated to solve the paper is **90 minutes**.
- **Question Volume:** The question paper contains a total of **100 objective-type multiple-choice questions (MCQs)**.
- **Negative Marking System:** Accuracy is critical, as a penalty of $\frac{1}{3}$ rd **mark** is deducted for every incorrect response.
- **Score Normalization:** For examinations conducted across multiple shifts, a statistical normalization method is applied to balance difficulty levels.

Minimum Qualifying Marks by Category

To clear the exam, candidates must achieve a minimum percentage score based on their community category:

| Category | Minimum Qualifying Marks |
|---|--------------------------|
| UR (Unreserved) | 40% |
| EWS (Economically Weaker Sections) | 40% |
| OBC (Non-Creamy Layer) | 30% |
| SC (Scheduled Caste) | 30% |
| ST (Scheduled Tribe) | 25% |

Note for Special Categories: > * Ex-Servicemen receive the same qualifying percentages relative to their respective communities. * Persons with Benchmark Disabilities (PwBD) may receive a relaxation of up to 2% in minimum qualifying marks if there is a shortage of candidates against reserved seats.

Subject-Wise Detailed Syllabus

Please note that the following topics are illustrative and provide a comprehensive framework, but the actual examination questions may extend beyond this list.

1. General Awareness

This section evaluates a candidate's grasp of contemporary developments and foundational knowledge regarding India and the global landscape.

- **Current Affairs:** Ongoing national and international events.
- **Geography & History:** Physical and socio-economic geography of India, Indian history, and the Indian freedom struggle.
- **Polity & Economy:** Indian Constitution, political systems, and the Indian economic structure.
- **Science & Environment:** Global and domestic environmental issues, along with major scientific and technological advancements.
- **Culture & Sports:** Indian cultural heritage, arts, achievements, and sports events.

2. General Intelligence and Reasoning

Designed to judge cognitive abilities, logical analysis, and problem-solving skills.

- **Analogies & Series:** Alphabetical and numerical patterns, similarities, and differences.
- **Coding-Decoding & Logic:** Coding systems, mathematical operations, syllogisms, and jumbling puzzles.
- **Visual Representation:** Venn Diagrams, data interpretation, and data sufficiency problems.
- **Analytical Reasoning:** Relationships (blood relations), directions, classification, conclusions, decision-making, and assessing statements, arguments, or assumptions.

3. Basics of Computers and Applications

Focuses on essential computer literacy, hardware, software, and networking foundations.

- **Hardware & Architecture:** Computer architecture, input/output peripherals, and storage devices.
- **Operating Systems:** Practical knowledge of Windows, Unix, and Linux systems.
- **Software Productivity:** Core applications like the MS Office suite.
- **Data & Internet:** Data representation techniques, internet protocols, emails, websites, web browsers, and computer security/viruses.

4. Mathematics

Covers standard numerical abilities, algebraic concepts, coordinate geometry, and foundational statistics.

- **Core Arithmetic & Algebra:** Number systems, rational/irrational numbers, BODMAS simplification, quadratic equations, and arithmetic progressions (AP).
- **Geometry & Trigonometry:** Properties of similar triangles, Pythagoras theorem, coordinate geometry, trigonometric ratios, heights, distances, surface areas, and total volumes.
- **Set Theory:** Representation of sets, empty/finite/infinite sets, subsets (including real numbers), universal sets, union, intersection, differences, and complements with their properties.
- **Statistics & Probability:** Measures of dispersion (range, mean deviation, variance, and standard deviation for grouped/ungrouped data), along with probability concepts like occurrence of events, exhaustive events, and mutually exclusive events.

5. Basic Science and Engineering

A major technical segment focusing on fundamental physics, electricity, and basic electronic systems.

- **Physics Fundamentals:** Units and dimensions, measurements, mass, weight, density, work, power, energy, speed, velocity, heat, and temperature.
- **Electricity & Magnetism:** Electric charge, electric field intensity, potential difference, simple circuits, conductors vs. insulators, Ohm's law (and its

limitations), series and parallel resistance networks, and the relation between potential, energy, and wattage.

- **Electromagnetism:** Ampere's law, magnetic force on moving charged particles/conductors, electromagnetic induction, Faraday's laws, electromagnetic flux, magnetic field, and magnetic induction.
 - **Electronics & Instrumentation:** Basic and digital electronics, components and circuits, microprocessors, microcontrollers, measuring principles, range extension methods, Cathode Ray Oscilloscope (CRO), LCD and LED panels, and transducers.
-

Tentative Question Paper Structure (Technician Gr III)

The subject-wise distribution provided below outlines a typical distribution of questions and marks for the entry-level Technician Gr III positions. The exact distribution in your specific question paper may vary slightly.

| Subject Area | Number of Questions | Maximum Marks |
|---|----------------------|------------------|
| Mathematics | 25 | 25 |
| General Intelligence & Reasoning | 25 | 25 |
| General Science | 40 | 40 |
| General Awareness | 10 | 10 |
| Total Scheme | 100 Questions | 100 Marks |

Source Data Managed via ADDARESULT.COM Educational Portal