

## RAILWAY RECRUITMENT BOARD

# RRB ALP

## Assistant Loco Pilot

### COMPLETE SYLLABUS & EXAM PATTERN 2026

CEN No. 01/2025 | Total Posts: 9,970 | CBT 1 Held: Feb 2026

#### STAGE 1

CBT 1 Screening 75 Qs  
/ 60 Min

#### STAGE 2

CBT 2 Merit Based 175  
Qs / 150 Min

#### STAGE 3

CBAT Aptitude Test  
Psycho Test

#### STAGE 4

Document Verification +  
Medical

<b>Exam Mode</b>	Computer Based Test (CBT)
<b>Languages</b>	English, Hindi & 13 Regional Languages
<b>Neg. Marking</b>	1/3 mark per wrong answer (CBT 1 & 2)
<b>Final Merit</b>	CBT 2 Part A (70%) + CBAT (30%)

This document provides the complete, in-depth syllabus and exam pattern for the RRB ALP 2026 examination as per the official notification CEN No. 01/2025 issued by the Railway Recruitment Board. Covers CBT 1, CBT 2 (Part A & B), CBAT, Document Verification, and Medical Examination stages.

*Compiled from official RRB notification | May 2026*

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## 1. EXAM OVERVIEW & KEY HIGHLIGHTS

<b>Conducting Body</b>	Railway Recruitment Board (RRB)
<b>Exam Name</b>	RRB ALP – Assistant Loco Pilot
<b>Notification No.</b>	CEN No. 01/2025
<b>Total Vacancies</b>	9,970 Posts
<b>Application Period</b>	19 May 2025 – 21 May 2025
<b>CBT 1 Exam Date</b>	16th, 17th, 18th February 2026
<b>Mode of Exam</b>	Computer Based Test (CBT) – Online
<b>Question Type</b>	Multiple Choice Questions (MCQ)
<b>Negative Marking</b>	1/3 mark deducted per wrong answer (CBT 1 & CBT 2)
<b>Languages</b>	English, Hindi + 13 Regional Languages
<b>Official Website</b>	www.rrbcdg.gov.in (and respective RRB websites)

## 2. SELECTION PROCESS – ALL STAGES

Stage	Test	Nature	Questions	Duration	Marks
Stage 1	CBT 1	Qualifying (Screening)	75 MCQs	60 Min	75
Stage 2	CBT 2 Part A	Merit (70% weight)	100 MCQs	90 Min	100
	CBT 2 Part B	Qualifying (35% min.)	75 MCQs	60 Min	75
Stage 3	CBAT (Psycho)	Merit (30% weight)	Multiple Batteries	42 Min (approx.)	N/A
Stage 4	Doc. Verif. + Medical	Final Screening	—	—	—

*NOTE: CBT 1 marks do NOT count toward the final merit list — it is purely a screening/qualifying test. Only CBT 2 Part A marks (70%) and CBAT marks (30%) determine the final merit list for ALP posts.*

## 3. CBT 1 – EXAM PATTERN

CBT 1 is the first screening stage. Candidates who qualify CBT 1 are shortlisted for CBT 2. The merit for CBT 1 shortlisting is 15 times the number of vacancies in each category.

Subject / Section	No. of Questions	Total Marks	Duration
General Intelligence & Reasoning	25	25	
Mathematics	20	20	
General Science	20	20	
General Awareness & Current Affairs	10	10	
<b>TOTAL</b>	<b>75</b>	<b>75</b>	<b>60 Minutes</b>

Marking Scheme: +1 for correct answer | -1/3 for wrong answer | 0 for unattempted. No sectional time limit — total 60 minutes for all sections.

## 4. CBT 1 – DETAILED SYLLABUS

### 4.1 Mathematics (20 Questions)

**Number System:** Natural, Whole, Integer, Rational & Irrational numbers; HCF & LCM; Divisibility rules; BODMAS; Surds & Indices

**Arithmetic:** Percentages; Profit & Loss; Discount; Simple & Compound Interest; Ratio & Proportion; Partnership

**Time & Work:** Work-efficiency problems; Pipes & Cisterns; Work & Wages

**Speed & Distance:** Time-Speed-Distance; Trains; Boats & Streams; Relative Speed

**Algebra:** Basic algebraic identities; Linear & Quadratic equations; Polynomials; Factorization

**Geometry:** Lines & Angles; Triangles (similarity, congruence); Circles; Quadrilaterals; Coordinate geometry basics

**Mensuration:** Perimeter, Area & Volume of 2D (square, rectangle, triangle, circle, trapezium) and 3D figures (cube, cuboid, cylinder, cone, sphere)

**Trigonometry:** Trigonometric ratios; Identities ( $\sin^2\theta + \cos^2\theta = 1$  etc.); Heights & Distances

**Statistics:** Mean, Median, Mode; Range; Frequency distribution; Bar graphs; Pie charts; Histograms; Data Interpretation

**Miscellaneous:** Age problems; Calendar & Clocks; Square & Cube roots; Decimal & Fractions

### 4.2 General Intelligence & Reasoning (25 Questions)

**Series:** Number series; Alphabetical series; Alpha-numeric series; Missing terms

**Analogy:** Semantic & figural analogies; Relationship-based analogies

**Classification:** Odd one out — word-based, number-based, figural

**Coding-Decoding:** Letter coding; Number coding; Symbol coding; Decoding messages

**Mathematical Ops.:** Using symbols as mathematical operators; Operator substitution

**Syllogism:** Two-statement deductions; Conclusions validity; Venn-diagram based

**Venn Diagrams:** Interpreting Venn diagrams; Finding relationships

**Directions:** Direction & distance problems; Map-based reasoning

**Blood Relations:** Family tree problems; Coded blood relations

**Arrangement:** Seating arrangement (linear, circular); Ranking & order

**Data Sufficiency:** Two-statement data sufficiency; Decision making

**Conclusions & Inferences:** Drawing conclusions from given statements

**Jumbling / Puzzle:** Sequence-based puzzles; Word arrangement; Sentence ordering

**Similarities & Differences:** Pattern recognition; Feature comparison

**Non-Verbal Reasoning:** Figure matrix; Embedded figures; Mirror & water images; Completion of patterns

### 4.3 General Science (20 Questions)

Covers Physics, Chemistry, and Life Sciences up to Class 10 (CBSE/State Board) standard.

Subject	Key Topics
<b>Physics</b>	Motion & Laws of Motion; Force & Newton's Laws; Gravitation; Work, Energy & Power; Pressure; Sound; Light – Reflection & Refraction; Electricity & Magnetism; Heat & Temperature; Simple Machines; Atomic structure basics
<b>Chemistry</b>	Matter & its properties; Elements, Compounds & Mixtures; Acids, Bases & Salts; Chemical reactions; Metals & Non-metals; Carbon compounds; Periodic Table basics; Air & Water; Fuels & combustion; Environmental Chemistry
<b>Biology (Life Sciences)</b>	Cell structure & functions; Tissues; Life processes – Nutrition, Respiration, Excretion, Reproduction; Control & Coordination; Heredity & Evolution; Ecosystem & Biodiversity; Diseases & Health; Plant Kingdom; Animal Kingdom

### 4.4 General Awareness & Current Affairs (10 Questions)

- Indian History – ancient, medieval, modern; Freedom struggle
- Indian Geography – physical features, rivers, climate, resources
- Indian Polity & Constitution – Parliament, judiciary, fundamental rights
- Indian Economy – budget, GDP, banking, monetary policy basics
- Science & Technology – recent developments, space missions, IT
- Current Affairs – national & international events (last 6–12 months)
- Sports – recent tournaments, championships, awards
- Miscellaneous – Days & events, books & authors, famous personalities
- Environment & Ecology – conservation, national parks, wildlife
- Railways-specific awareness – Indian Railways facts, projects

## 5. CBT 2 – EXAM PATTERN

CBT 2 is the most critical stage — shortlisted candidates from CBT 1 appear for this test. It comprises two parts: Part A (general technical subjects) and Part B (trade-specific). Part A marks carry 70% weightage in the final merit list.

Part	Subject / Section	Questions	Marks	Duration
Part A	Mathematics	25	25	
	General Intelligence & Reasoning	25	25	90 Min
	Basic Science & Engineering	40	40	
	General Awareness on Current Affairs	10	10	
<b>Part A Sub-Total</b>		<b>100</b>	<b>100</b>	<b>90 Min</b>
<b>Part B</b>	Trade / Engineering Discipline Syllabus	<b>75</b>	<b>75</b>	<b>60 Min</b>
<b>GRAND TOTAL</b>		<b>175</b>	<b>175</b>	<b>150 Min</b>

*Part B is QUALIFYING ONLY – minimum 35% marks required regardless of category. Part B marks do NOT add to merit. Part A marks form 70% of final merit (CBAT = 30%).*

## 6. CBT 2 PART A – DETAILED SYLLABUS

### 6.1 Mathematics (25 Questions)

All topics from CBT 1 Mathematics, plus:

- Number system, BODMAS, Decimals, Fractions, LCM & HCF
- Ratio & Proportion; Percentages; Profit & Loss
- Simple & Compound Interest; Time and Work; Pipes & Cisterns
- Time & Distance; Trains; Boats & Streams
- Algebra – Linear & Quadratic equations; Polynomials; Identities
- Geometry – Lines, Angles, Triangles, Circles, Quadrilaterals
- Mensuration – 2D & 3D shapes: area, perimeter, volume
- Trigonometry – ratios, identities, heights & distances
- Statistics – Mean, Median, Mode; Bar graphs; Pie charts; Data interpretation
- Square roots; Age calculations; Calendar & Clocks

### 6.2 General Intelligence & Reasoning (25 Questions)

Same topics as CBT 1 Reasoning at a higher difficulty level:

- Analogies (Semantic, Symbolic, Figural)
- Alphabetical & Number Series
- Coding & Decoding
- Mathematical Operations

- Relationships & Syllogism
- Jumbling & Puzzles
- Venn Diagrams
- Data Interpretation & Sufficiency
- Conclusions & Decision Making
- Similarities & Differences
- Space Visualization
- Spatial Orientation
- Problem Solving & Analysis
- Statement & Conclusion / Assumption
- Non-verbal reasoning – Figure Matrix, Mirror Images, Embedded Figures

### 6.3 Basic Science & Engineering (40 Questions) ← Highest Weightage

This is the most important section of CBT 2 Part A with 40 marks. It covers engineering fundamentals relevant to railway operations.

Topic Area	Detailed Subtopics
<b>Engineering Mathematics</b>	Units & Measurements; Basic algebra; Matrices (basic); Probability basics
<b>Physics Fundamentals</b>	Mechanics – Newton's laws, friction, work-energy-power; Kinematics; Fluid Pressure & Buoyancy; Thermodynamics basics – heat, temperature, thermal expansion; Waves & Sound; Light – reflection, refraction, lenses, mirrors; Electricity – Ohm's law, Kirchhoff's laws, resistors, capacitors; Magnetism & Electromagnetism; Semiconductors basics
<b>Basic Electrical Engineering</b>	AC & DC circuits; Voltage, Current, Resistance; Power & Energy; Transformers (working principle); Electric motors & generators (basics); Fuses, circuit breakers, switches; Earthing & safety
<b>Basic Electronics</b>	Diodes (PN junction, Zener); Transistors (NPN, PNP) – types & working; Logic gates (AND, OR, NOT, NAND, NOR, XOR); Number systems – Binary, Octal, Hexadecimal; Rectifiers (half-wave, full-wave); Amplifiers (basic concept); Op-amps (basic)
<b>Engineering Drawing</b>	Orthographic projections; Isometric views; Sectional views; Reading of engineering drawings; Symbols & conventions; Dimensions
<b>Mechanical Engineering Fundamentals</b>	Simple machines; Gear trains; Pulleys & levers; Springs; Properties of materials – tensile strength, hardness, ductility; Heat treatment processes basics; Welding – types & applications; Lathes & machining basics; Bearings & lubrication
<b>IT &amp; Computing Basics</b>	Computer hardware & software; Input/output devices; Memory – RAM, ROM, storage; Operating systems (concept); Internet basics; MS Office basics (Word, Excel); Binary arithmetic; Basic networking concepts
<b>Environment &amp; Pollution Control</b>	Air, water & soil pollution; Greenhouse effect; Ozone depletion; Noise pollution; Environmental laws & standards

### 6.4 General Awareness & Current Affairs (10 Questions)

Same scope as CBT 1 General Awareness. Focus areas:

- Science & Technology developments
- National & International current affairs (last 12 months)
- Indian Railways – projects, schemes, achievements

- Government schemes & policies
- Sports events & championships
- Awards & honours – Bharat Ratna, Padma awards etc.
- Important dates, personalities, books & authors

## 7. CBT 2 PART B – TRADE SYLLABUS (Qualifying)

Part B tests trade-specific knowledge. Candidates must score at least **35% marks** (qualifying). The question paper is based on the trade/discipline of the candidate's ITI/Diploma/Degree. Below are the major trades and their key syllabus areas.

### Trade: Electrician / Wireman

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- Basic electrical principles – Ohm's law, Kirchhoff's laws
- AC & DC circuits; Single-phase & three-phase systems
- Electrical machines – transformers, motors, generators
- Wiring systems – domestic, commercial, industrial
- Switchgear – fuses, MCBs, ELCBs, isolators
- Earthing methods; Electrical safety & protection
- Batteries & charging; Power factor & energy meters
- Lighting circuits; Electrical hazards & first aid

### Trade: Electronics Mechanic

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- Semiconductor devices – diodes, transistors, FETs
- Amplifiers – common emitter, common base, common collector
- Oscillators – Hartley, Colpitts, RC phase shift
- Rectifiers – half-wave, full-wave, bridge; Filters
- Power supplies – regulated & unregulated
- Digital electronics – logic gates, flip-flops, counters
- Microprocessors & microcontrollers – 8085, 8051 basics
- Communication systems – AM, FM, modulation & demodulation
- TV, radio & mobile communication basics
- Op-amps & applications; PCB design basics

### Trade: Fitter

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- Engineering drawing – reading, interpretation, tolerances
- Fitting tools – files, chisels, hammers, spanners, hacksaw
- Bench work – marking, cutting, filing, chipping
- Drilling, reaming, tapping & threading operations
- Fasteners – bolts, nuts, screws, rivets, keys
- Joining methods – welding, brazing, soldering
- Measuring instruments – vernier caliper, micrometer, dial gauge
- Machine tools – lathe, drilling machine, grinder (basics)
- Material properties – hardness, tensile strength, ductility
- Lubrication; Preventive maintenance

### Trade: Mechanic Diesel

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- Diesel engine fundamentals – 2-stroke & 4-stroke cycle
- Engine components – pistons, cylinders, crankshaft, camshaft
- Fuel system – fuel injection pump, injectors, filters
- Cooling system – water-cooled & air-cooled engines
- Lubrication system – types, oil pumps, filters

- Electrical system – starting motor, alternator, batteries
- Transmission & clutch – gearbox, differential
- Brakes – hydraulic, air, disc & drum brakes
- Chassis & suspension systems
- Emission standards & pollution control

### **Trade: Mechanic Motor Vehicle (MMV)**

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- Automobile engine – petrol & diesel engine working
- Fuel systems – carburetor, fuel injection (MPFI, CRDI)
- Ignition system – conventional, electronic, distributor-less
- Steering & suspension – types, alignment, balancing
- Braking systems – hydraulic, ABS, parking brakes
- Drive line – clutch, gearbox, propeller shaft, differential
- Electrical systems – charging, starting, lighting
- Air conditioning & HVAC basics
- Vehicle body – types & materials
- Road safety & traffic rules

### **Trade: Instrument Mechanic**

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- Measuring instruments – pressure, temperature, flow, level
- Calibration methods & error analysis
- Industrial sensors – RTD, thermocouple, pressure transmitters
- Control systems – open loop & closed loop
- PLC basics – programming, ladder logic
- Signal conditioning – amplifiers, filters, converters
- Pneumatic & hydraulic instruments
- Analytical instruments – pH meter, conductivity meter
- Data acquisition systems
- Maintenance of industrial instruments

### **Trade: Machinist / Turner**

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- Lathe machine – parts, operations (turning, threading, facing)
- Drilling machine – types & operations
- Milling machine – types & cutting operations
- Grinding – cylindrical, surface, tool & cutter grinding
- Measuring tools – vernier, micrometer, gauges
- CNC machines – basic concepts, G-codes & M-codes
- Cutting tools – geometry, materials, tool life
- Heat treatment – annealing, hardening, tempering
- Limits, fits & tolerances
- Sheet metal work; Press tools

### **Trade: Mechanic Radio & TV / COPA**

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- Communication electronics – radio, TV working principles
- Antenna theory; Cable TV & satellite systems
- Computer hardware – CPU, RAM, storage, I/O
- Operating systems – Windows, Linux basics

- Networking – LAN, WAN, TCP/IP, Internet
- Software – MS Office, database basics
- Programming basics – C language, HTML
- Troubleshooting computers & peripherals
- Data communication – serial, parallel; USB, HDMI
- Cybersecurity basics

*Other eligible trades include: Mechanic (Refrigeration & Air Conditioning), Heat Engine, Blacksmith, Carpenter, Painter, Plumber, Welder, Surveyor, Draughtsman (Civil/Mechanical), Electrician (Power Distribution), and more. Candidates should refer to the official RRB notification for their specific trade mapping.*

## 8. CBAT – COMPUTER BASED APTITUDE TEST (Psycho Test)

CBAT (also called Psycho Test) is mandatory for ALP posts only. It assesses the psychological and aptitude suitability of candidates for the role of a locomotive pilot — safety-critical position. It carries **30% weightage** in the final merit list. Candidates must attempt all tests within the given time.

<b>Duration</b>	Approximately 42 minutes (varies by battery)
<b>No. of Tests</b>	Multiple test batteries (typically 5–7 tests)
<b>Language</b>	Bilingual – English & Hindi
<b>Negative Marking</b>	No negative marking in CBAT
<b>Merit Weightage</b>	30% of final ALP merit list
<b>Practice Tests</b>	Candidates get practice tests before actual CBAT
<b>Attempts Allowed</b>	One attempt only; no re-test

### CBAT Test Batteries

Test Battery	Time	Description
<b>Test of Memory (Short-term Memory)</b>	7–8 min	A sequence of figures/numbers is shown briefly. Candidates must recall and identify the pattern from options. Tests visual & numerical short-term memory.
<b>Following Directions (Attention)</b>	5–6 min	Candidates must follow a series of instructions and mark the correct response. Tests ability to follow complex directions under time pressure.
<b>Concentration (Attention &amp; Focus)</b>	5–6 min	Continuous attention tasks — identify specific patterns among distractors. Tests sustained attention and concentration ability.
<b>Perceptual Speed (Speed &amp; Accuracy)</b>	5–6 min	Rapidly compare figures, symbols, or letter strings and identify matches/differences. Tests speed of perception and accuracy.
<b>Depth Perception (Spatial Ability)</b>	5–6 min	Judge distances, depths, and spatial relationships between objects. Critical for safe train operation — assessing tracks, signals, distances.
<b>Spatial Scanning (Spatial Reasoning)</b>	5–6 min	Navigate through mazes or identify paths in a spatial layout. Tests route-finding ability and spatial awareness.
<b>Personality / Behavioural Test (optional battery)</b>	Variable	Assess personality traits relevant to safety-critical roles — stress tolerance, rule compliance, risk-taking tendency, and situational judgement.

*Preparation Tip: Practice psychometric/aptitude test series available on RRB's official practice test platform. Focus on speed, accuracy, and pattern recognition. CBAT cannot be prepared through conventional study — regular practice tests are key.*

## 9. DOCUMENT VERIFICATION & MEDICAL EXAMINATION

### Document Verification (DV)

- Matriculation (10th) Certificate & Mark Sheet
- ITI Certificate / Diploma / B.Tech Degree (as applicable)
- Date of Birth Certificate
- Category Certificate (SC/ST/OBC/EWS) – in prescribed format
- Disability Certificate (if applicable – PwBD)
- Ex-Serviceman Discharge Certificate (if applicable)
- Domicile / Residence Certificate (if required by RRB)
- Aadhaar Card / Voter ID / Passport (any valid photo ID)
- Recent passport-size photographs (as specified in admit card)
- No Objection Certificate (for currently employed candidates)

### Medical Examination Standards

<b>Visual Acuity</b>	6/9 (with or without glasses) for ALP; No night blindness; No colour blindness for ALP
<b>Hearing</b>	Normal hearing in both ears; No deafness even with hearing aid
<b>Physical Fitness</b>	No physical deformity; Fit for field duties; Normal BMI range
<b>Medical Category</b>	A1 — Highest medical category required for ALP (Safety Category post)

## 10. MERIT LIST CALCULATION

Component	Stage	Weightage	Max Marks
<b>CBT 1</b>	Stage 1 (Screening)	0% (Not counted)	75
<b>CBT 2 Part A</b>	Stage 2	70%	100
<b>CBT 2 Part B</b>	Stage 2 (Qualifying)	0% (Min. 35% to qualify)	75
<b>CBAT</b>	Stage 3	30%	N/A

*Final Merit Formula: Final Score = (Normalized CBT 2 Part A Score × 0.70) + (CBAT Score × 0.30). Normalization is applied to CBT 2 Part A scores to account for variations across shifts. Tie-breaking: Date of birth (older candidate preferred) → percentage in qualifying examination.*

## 11. PREPARATION STRATEGY & TIPS

- **Prioritize Basic Science & Engineering:** With 40 questions in CBT 2 Part A, this is the highest-weighted section. Master electrical, electronics, and physics fundamentals.
- **CBT 1 as a Warm-Up:** While CBT 1 marks don't count for merit, qualifying it is mandatory. Practice 75-question mock tests within 60 minutes.

- **Trade Syllabus Practice:** Score at least 45–50% in Part B (qualifying is 35%). Strong trade knowledge also reflects your technical foundation.
- **CBAT Practice:** Attempt psychometric practice tests daily. RRB provides official practice links before the exam — use them regularly.
- **Time Management:** CBT 2 Part A – target 55–60 seconds per question. Part B – target 45–50 seconds. Attempt strongest subjects first.
- **Current Affairs – Last 12 Months:** Read one newspaper daily or follow a reliable current affairs app. Focus on railways, science & tech.
- **Negative Marking Caution:** Avoid random guessing. Attempt only if you can eliminate at least 2 options.
- **Previous Year Papers:** Solve last 5–10 years' RRB ALP papers. Focus on recurring topics in Mathematics and Reasoning.
- **Subject-wise Study Plan:** Allocate time proportionally — Basic Sci & Engg (40%), Math (20%), Reasoning (20%), Trade (15%), GS/GA (5%).

## 12. IMPORTANT BOOKS & RESOURCES

Subject	Recommended Books	Author / Publisher
<b>Mathematics</b>	Quantitative Aptitude for Competitive Exams	R.S. Aggarwal – S. Chand
<b>Reasoning</b>	A Modern Approach to Verbal & Non-Verbal Reasoning	R.S. Aggarwal – S. Chand
<b>General Science</b>	Lucent's General Knowledge (Science section)	Lucent Publications
<b>Basic Sci. &amp; Engg.</b>	RRB ALP Basic Science & Engineering (specific book)	Kiran / Arihant / GKP
<b>Trade Syllabus</b>	ITI trade textbooks (NCVT) for your specific trade	NCVT / NIMI
<b>General Awareness</b>	Manorama Yearbook / Current Affairs Monthly	Manorama / Vision IAS
<b>Previous Papers</b>	RRB ALP Chapterwise Solved Papers	Kiran / Arihant Publications
<b>CBAT Practice</b>	RRB official practice test portal + Psychometric apps	RRB Official Website

Official Website: [www.rrbcdg.gov.in](http://www.rrbcdg.gov.in) | For zone-specific notifications, visit your respective RRB website. Always verify information against the official CEN notification before starting preparation.

**Best of luck for your RRB ALP 2026 examination! Consistent practice, focused preparation, and thorough understanding of the syllabus are your keys to success.**