



भारत सरकार-रेल मंत्रालय  
अनुसंधान अभिकल्प और मानक संगठन  
लखनऊ - 226011  
EPBX (0522)2451200  
Fax (0522)2458500

25  
Government of India-Ministry of Railways  
Research Designs & Standards Organisation  
Lucknow - 226011  
DID (0522) 2450115  
DID (0522) 2465310



Dated: 23.07.2025

No.PT/PP/1.1.7

1. Senior Scientific Officer(Psychology),  
C/o PCOM, Southern Railway,  
Park Town, Chennai - 600 003.
2. Senior Scientific Officer(Psychology),  
C/o- COM/G, Northern Railway,  
Baroda House, New Delhi -110 001.
3. Junior Scientific Officer (Psychology)  
C/o- PCSO, Central Railway,  
CSTM, Mumbai - 400 001.
4. Junior Scientific Officer (Psychology)  
C/o-PCOM, South Eastern Railway,  
Garden Reach, Kolkata - 700 043.
5. Junior Scientific Officer (Psychology),  
C/o- PCOM, Northeast Frontier Railway,  
Maligaon, Guwahati-781011.

Sub: **Online Departmental Aptitude Test - SOP for administration and evaluation of aptitude tests in CBAT for ALP & SM under the departmental promotion quota.**

The Standard Operating Procedure (SOP) for the administration and evaluation of aptitude tests through the Computer Based Aptitude Testing (CBAT) mode is hereby issued for the posts of Assistant Loco Pilot (ALP) and Station Master (SM) under the Departmental Promotion Quota.

This SOP forms an integral part of the online selection process for departmental candidates and is to be followed in coordination with the concerned Railway Recruitment Cells (RRCs) and Zonal Railways. The objective is to ensure standardisation, transparency, efficiency, and fairness in conducting aptitude tests for promotional vacancies in safety categories.

All concerned officials and Psycho-Technical Units are requested to adhere strictly to the procedures outlined in the SOP to facilitate smooth and secure execution of the online aptitude tests.

A copy of the approved SOP is enclosed herewith for ready reference and necessary implementation.

This has the approval of Executive Director/Traffic & Psycho-Tech.

DA: SOP for DPQ.

23/07/25

(Manish Kumar)

Junior Scientific Officer/Psycho.  
For ED/Traffic & Psycho.Tech.

Copy to:

1. All Chairman, RRC, Indian Railways for kind information please.
2. All PCPO, Indian Railways for kind information please.

DA: SOP for DPQ.

(Manish Kumar)

Junior Scientific Officer/Psycho.  
For ED/Traffic & Psycho.Tech.

24

क्रमांक-31

For official use only  
केवल सरकारी प्रयोग हेतु



सत्यमेव जयते  
भारत सरकार

GOVERNMENT OF INDIA  
रेल मंत्रालय  
MINISTRY OF RAILWAYS

STANDARD OPERATING PRECEDURE FOR ADMINISTRATION AND  
EVALUATION OF APTITUDE TESTS IN COMPUTER BASED TESTING MODE  
(CBAT) FOR ASSISTANT LOCO PILOT AND STATION MASTER UNDER THE  
DEPARTMENTAL PROMOTION QUOTA

सहायक लोको पायलट और स्टेशन मास्टर के लिए विभागीय पदोन्नति कोटा के अंतर्गत कंप्यूटर आधारित परीक्षण  
(CBAT) मोड में अभिक्षमता परीक्षणों के संचालन और मूल्यांकन के लिए मानक संचालन प्रक्रिया

JULY, 2025

जुलाई, 2025



अनुसंधान अभिकल्प और मानक संगठन मानकनगर,  
लखनऊ -226011.

Research Designs & Standards Organisation  
Manak Nagar, Lucknow- 226011

**STANDARD OPERATING PRECEDURE FOR ADMINISTRATION AND EVALUATION OF APTITUDE TESTS IN COMPUTER BASED TESTING MODE (CBAT) FOR ASSISTANT LOCO PILOT AND STATION MASTER UNDER THE DEPARTMENTAL PROMOTION QUOTA**

**1. OBJECTIVE**

1.1 Aptitude tests have been prescribed for promotion/deployment to identified categories of posts, vide Board's letter No. E (NG)I/2002/PM1/31 dated 22.08.2003 and 29.03.2005 (Annexure I and II), with a view to improve quality of personnel and operational safety. These tests aim at matching employees with requirements of respective jobs in terms of basic skills, aptitudes and personality dispositions. This procedure aims at outlining the responsibility of various agencies involved in aptitude testing, viz. Zonal Railways, Exam Conducting Agency, Regional Psycho-Technical Units and RDSO.

**2. SCOPE**

2.1 The Computer Based Aptitude Test (CBAT) is adopted for the categories of Assistant Loco Pilot and Station Master (SM) under the departmental promotional quota. (Annexure III).

**3. APPLICABILITY**

The Staff in categories mentioned at Para 2.1 (i) and (ii) will be required to qualify in the written test held as part of the selection proceedings prior to appearing in the CBAT and shall be applicable and administered to those candidates who qualify in the written tests conducted by RRC/Sr.DPO against the departmental promotion quota.

**4. STATUS OF APTITUDE TESTS**

4.1 The CBAT shall be in the nature of qualifying criteria, i.e., only those candidates who secure minimum stipulated cut-off marks, as decided by Railway Board, shall qualify for empanelment.

4.2 The marks obtained in written test, service records, etc., will be added to the marks obtained in CBAT to prepare a combined merit list, in which maximum marks will be 100. The ratio of written test marks to aptitude test marks shall be 80:20.

4.3 In terms of Railway Board's letter No. E(NG)I/85/PM2/12 dated 21.12.1992/08.01.1993 and E(NG)I/98/PM1/4 dated 13.07.1999, failure in psychological tests does not debar a candidate from appearing in the psychological test again. However, to offset the effect of memory, a reasonable gap of three months or more may be given before the unsuccessful candidates are permitted to appear in CBAT (Annexure IV).

**5. APTITUDE TESTS TO BE USED IN SELECTION/PROMOTION**

The test batteries of CBAT standardised by RDSO for respective categories shall be used in departmental selection/promotion. RDSO may replace a test battery, in part or full, for any category mentioned in Para 2.1, as and when considered necessary, as a result of further research or periodic reviews.

## **6. ADMINISTRATION OF APTITUDE TESTING PROGRAMME**

6.1 The responsibility of conducting CBAT and their evaluation shall rest primarily with the Exam Conducting Agency (ECA) in coordination with the Psycho-Technical Unit of the Zonal Railway and the RRC/Sr.DPO.

6.2 The aptitude test shall be conducted by the Exam Conducting Agency. The programme of testing shall be chalked out by RRC/Sr.DPO, who shall draw the merit list of the candidates who have cleared the written test. The dates and place of testing may be fixed by RRC/Sr.DPO in consultation with the Exam Conducting Agency.

6.3 The sequence of activities involved in the application of CBAT and specific functions and responsibilities of various agencies involved in the process are indicated in Para 8.

## **7. Administration and evaluation of Aptitude Tests**

The responsibility of administering Aptitude Tests and their evaluation shall be a joint endeavor of the SSO/JSO of the Zonal Railway in coordination with RRC/SR.DPO entrusted with the task of recruiting safety staff, and the service provider selected by the nodal RRC/Sr.DPO. The Aptitude Tests shall henceforth be conducted in CBT mode, facilitated by the service provider engaged for this purpose by the nominated RRC/Sr. DPO as per the order of the Railway Board. In order to conduct Aptitude Tests in CBT mode, the service provider shall be entrusted with the task of facilitating this, and the agency so engaged by the concerned RRC/Sr. DPO, shall facilitate the SSO/JSO of the concerned Zonal Railway in digitization, integration, and application of Aptitude Tests using compatible software platform provided by them. Thereafter, secured transmission of the test materials from the SSO/JSO of the Zonal Railway shall occur through VPN in a highly confidential manner for administration at the designated test centres selected under the guidance of the SSO/JSO of the Zonal Railway.

The RRC/Sr.DPO shall draw a programme of testing in consultation with the SSO/JSO of the Zonal Railway and provide necessary facilities and assistance for the smooth conduct of Aptitude Tests in CBT mode in an efficient manner, facilitated by engaging a competent service provider for this purpose.

The role of the SSO/JSO of the Zonal Railway shall be confined to providing Aptitude Test batteries meant for the category for which Aptitude Tests are proposed to be conducted, and the suitability criteria for evaluating the performance of candidates in the Aptitude Tests, sample checking of the correctness of result, technical control on testing, its periodic monitoring, and R&D activities.

## **8. Activities involved in the Application of Aptitude Tests**

The activities involved in the application of Aptitude Tests and the functions and responsibilities of various agencies in conducting them shall be as under:

1. The Aptitude Tests shall be administered by the joint efforts of RRC/Sr. DPO with the help of a service provider engaged by the RRC/Sr. DPO for that specific purpose, and the SSO/JSO of the Zonal Railway as per guidelines issued by RDSO.
2. Upon finalization of the result of the written examination conducted by RRC/Sr. DPO, the RRC/Sr.DPO shall draw a tentative programme for Aptitude Test in consultation with the

SSO/JSO of the Zonal Railway for confirmation of dates. The RRC/Sr.DPO shall engage a service provider to facilitate Aptitude Test in CBT mode, and written information to this effect shall be provided to the SSO/JSO of the Zonal Railway mentioning the name, address, and contact details of the service provider so engaged.

3. The service provider, under the guidance of and in coordination with the SSO/JSO of the Zonal Railway, shall facilitate the SSO/JSO of the Zonal Railway in the digitization, integration, and interfacing of Aptitude Test items in a confidential manner in the office of Psycho-Technical Unit of the Railway, ensuring readiness for transmission of computer-adapted tests in protected, encrypted, and secured form through VPN and flawless administration of Aptitude Tests.
4. The service provider shall conduct necessary checks at the test centres prior to Aptitude Test to avoid any problems arising while conducting the Aptitude Test.
5. On the date of testing, the Centre Heads and IT Managers of the service provider would reach the test centres, as selected by the RRC/Sr.DPO, three hours before the commencement of the test and would make sure that all necessary arrangements are in order, both primary and backup servers are configured properly, and arrangements for redundancy is in place.
6. The service provider shall set up a primary server in the control room at the test centres under the charge of an IT Manager to monitor all the activities pertaining to Aptitude Test with the purpose of acting promptly to solve any problems arising during testing. The service provider shall also set up the monitoring systems at the office of concerned RRC/Sr. DPO to enable the authorized personnel to monitor all the activities related to Aptitude Test at different centres in various locations where test is being conducted.
7. The Aptitude Test transmitted by the SSO/JSO of the concerned Zonal Railway through Virtual Private Network (VPN) to the data centre of the service provider shall be transmitted to the primary server at the test centre by the SSO/JSO of the concerned Zonal Railway with the help of a bundle password for the initiation of Aptitude Test at the test centres.
8. All security measures for the transportation of test materials from the office of the SSO/JSO of the Zonal Railway to the data centre and then to primary servers at the test centres for administration of tests shall be taken care of by the service provider in such a manner that there is no leakage of test content either before, during, or after testing. To ensure all these activities, the service provider shall remain closely associated and shall provide all necessary technical support, both at the office of the SSO/JSO of the Zonal Railway and at the test centres.
9. The candidates shall be allowed to enter their designated test centres only after the primary server is activated. Thereafter, verification of documents such as Admit Cards, ID proofs, original medical certificate, biometric verification, etc., shall be done jointly by the RRC/Sr. DPO and the service provider. Verification of the candidature of candidates, taking their declaration, filling out necessary documents, etc., as prescribed by the RRC/Sr.DPO, shall be the sole responsibility of RRC/Sr.DPO and the service provider.
10. The candidates shall not be allowed to bring any paper, pencil, pen, watch, electronic gadgets, etc., inside the hall during testing. Rough sheets shall not be provided to the candidates. It shall be mentioned by the concerned RRC/Sr. DPO in the call letters issued by them to the candidates.
11. The RRC/Sr.DPO shall also inform the candidates through call letters, their websites, and at the test centres, that use of any unfair means or non-compliance with instructions would lead to rejection of their candidature, though they will be allowed to complete the remaining tests.
12. Before the commencement of Aptitude Tests, the service provider shall ensure a mock test link on the RRC/Sr.DPO website. The service provider shall seek assistance from SSO/JSO of the Zonal Railway in preparing the module for the mock test link.

13. Until such time as the Aptitude Test is conducted and the test materials are electronically destroyed, making them inaccessible by any unauthorized person and accessible only to authorized persons throughout the duration of the test, the service provider shall ensure the security of the test material in every respect, be it the candidates or the personnel from the service provider. The use of mobile phones is strictly prohibited for all.
14. In computer-based testing, the software shall also be capable of generating different sets of tests by jumbling encrypted test items in different permutations and combinations at each of the test centres such that no two adjacent candidates receive test items in the same order to ensure the administration of different variants of tests in different combinations at the test centres.
15. If any discrepancy is noticed in the test format, the same shall immediately be advised to the SSO/JSO of the Zonal Railway. A log book in a prescribed proforma (Annexure-V) shall be maintained by the representative of RRC/Sr.DPO to record such discrepancies and other incidents related to Aptitude Tests for taking appropriate remedial action as deemed appropriate.
16. The service provider shall ensure that Aptitude Test batteries in encrypted and password-protected form have been received at the test centres in a secured manner and cannot be opened until the password is populated through VPN by the SSO/JSO of the Zonal Railway. In case any problem is encountered at the test centres, the same shall immediately be reported to the SSO/JSO of the Zonal Railway by the representative of RRC/Sr.DPO.
17. In case any of the candidate's terminals stop working at the test venue due to any reason, the service provider shall provide another working terminal to the affected candidate immediately, ensuring that the candidate does not incur any loss on this account. If the candidate continues on the same terminal after rectification, it must be ensured that no time is lost.
18. Since Aptitude Tests in CBT mode shall be faster, it would be possible for the RRC/Sr. DPO to conduct two/three sessions in a day depending on the number of candidates and the capacity of test centres selected by the RRC/Sr.DPO in consultation with the service provider.
19. None of the officials present during testing shall go through the content of Aptitude Test during a testing session and shall not render any assistance to the candidates in solving the test items. However, in case any candidate seeks some technical clarification pertaining to Aptitude Test, the same shall be addressed by the service provider, but he shall not provide any information which may hint at the answer to a particular test item.
20. The service provider shall ensure that the Aptitude Test items are neither stored in any form in any of the systems or the servers nor retrieved unauthorizedly. He shall also ensure that the tests, test items, and answers are not communicated to any of the candidates, even if requested (Annexure-VI).
21. Unauthorized access and retrieval of test content and dissemination of such information shall constitute leakage of confidential test items, leading to cancellation of the current test. In such a case, necessary legal course of action shall be taken against the service provider.
22. During Aptitude Test, the Traffic & Psycho-Technical Directorate of RDSO may depute its representatives for quality audit at test centres.
23. Data files and results of the candidates in coded form will be transmitted to the SSO/JSO of the concerned Zonal Railway by the service provider. The service provider shall render technical assistance in the processing of results and also as and when required.
24. The result of Aptitude Test shall be processed on the basis of tamper-proof data of the responses of candidates captured during test administration. Processing of result shall be done on the basis of suitability criteria communicated by the SSO/JSO of the concerned Zonal Railway. The auto-generated result by the software of the service provider shall be offered to the SSO/JSO of the concerned Zonal Railway for verification, validation, and onward transmission to the concerned RRC/Sr.DPO for preparation of the final merit list.

25. The SSO/JSO of the concerned Zonal Railway shall verify the correctness of the result auto-generated by the service provider's software for 10% of randomly selected candidates by tallying their responses with the data file, to ensure the correct application of suitability criteria by the software in CBT mode. The service provider shall provide all necessary technical assistance as and when required during the verification process. While processing the data for result preparation, a backup shall be maintained to prevent any inadvertent loss of data. The data file shall be examined for any uneven or abnormal distribution of marks, or any other irregularities in each test. In case any discrepancy is observed, it shall be promptly communicated to the service provider for reprocessing of the results, and the above verification process shall be repeated for 10% of randomly selected candidates to ensure correctness.
26. Only when it is ensured that the result has been processed correctly by the service provider, the coded results shall be advised accordingly to the service provider and the nodal RRB/RRC for publication. After decoding the results with the help of the service provider and publishing them, the nodal RRC/Sr.DPO shall retain the results and all data with demographic details for further use, including replying to RTI queries. The coded data may be shared with RDSO for further R&D activities, if required. The responses of candidates shall be preserved in the 'Data Bank' of the RRC/Sr.DPO for a period of five years from the date of panel declaration for any future queries, after which they may be disposed of with permission from the competent authority. In case there is any court case or vigilance inquiry pending against a particular selection, the data shall be preserved until the finalization of the case.

#### **9. Specific Functions and Responsibilities of Different Agencies involved in Aptitude Testing**

In addition to the points elucidated in the "Activities involved in the application of Aptitude Testing" mentioned above, the following specific functions and responsibilities shall be ensured by the different agencies.

#### **10. Functions and Responsibilities of RRC/Sr. DPO**

1. Inform the schedule of the Aptitude testing programme and Aptitude Test to the SSO/JSO of the concerned Zonal Railway, indicating the category, number of candidates to be tested, etc., for confirmation of the dates/schedule.
2. Upon receipt of confirmation of dates from the SSO/JSO of the Zonal Railway for which recruitment is being arranged, chalk out a testing programme and issue call letters to the shortlisted candidates with the help of the service provider, on the basis of the written examination
3. Arrange suitable test centres for the administration of Aptitude Tests in consultation with the SSO/JSO of the Zonal Railway and the service provider. The selected test centres should have facilities for an adequate number of computer terminals with LAN connectivity, primary and secondary servers, etc., for conducting tests in an uninterrupted manner, in addition to other necessary terminals and furniture for candidates and the officials supervising the testing. Extra terminals shall also be kept ready at the test centres to take care of non-functioning of any test terminals so that candidates' precious time is not lost. In case of any unforeseen interruption, such as LAN disconnection or server problem, there should be backup mechanisms to take care of the failures and promptly address any inconvenience to candidates. The test centres should be free from noise and distractions and have adequate illumination and ventilation. Uninterrupted power supply should be ensured to avoid disturbances in the administration of Aptitude Test. Adequate security arrangements should be made outside the test centres.

4. Verification, including biometric identification of candidates to ensure the genuineness of those called in a particular session; their attendance, etc., should be ensured in close coordination with the service provider.
5. The RRC/Sr. DPO shall make necessary arrangements with the service provider to assign a unique code number to each candidate to anonymize their identity while processing of result, as data sent to the SSO/JSO of the concerned Zonal Railway must be in coded form only to maintain confidentiality.
6. Ensure that the service provider, engaged to facilitate Aptitude Tests in CBT mode, is a professional body of high repute with adequate experience of conducting examinations for selecting candidates through competitive examinations organised by government organisations.
7. After the declaration of the panel, demographic details and scores of the selected candidates along with their place of posting shall be advised to RDSO for follow-up research.
8. The service provider must also ensure that no multi-drives are created in any case so that no two similar IDs are generated during the examination.
9. Netboot networking software shall be used for Aptitude Tests to facilitate uniformity in screen resolution and also to maintain security.

**10. Some important points that need to be considered while selecting a service provider are as under:**

- i. The RRC/Sr. DPO shall consider any service provider in consultation with the SSO/JSO of the concerned Zonal Railway to ensure better and timely integration of Aptitude Test in computerised format.
- ii. The service provider should be professional, trustworthy, and must provide an undertaking to maintain the confidentiality of test items and test processes. The agency shall be held accountable and responsible for any breach of confidentiality, with clear provisions to this effect incorporated in the terms and conditions of the contract, making them legally binding. To ensure this, a Non-Disclosure Agreement (NDA) shall be signed among the SSO/JSO of the concerned Zonal Railway, RRC/Sr. DPO and the service provider prior to the conduct of the examination.
- iii. The service provider should be prompt and proactive in rendering services to meet the requirements of digitisation, customisation, integration, and interfacing of Aptitude Tests (currently available and under development), as decided by the SSO/JSO of the concerned Zonal Railway, on their technical platform for transmission to the test centres for use in Aptitude Test and also sampling of newly developed tests as part of the R&D process as and when required.
- iv. The service provider's software should be compatible to incorporate and integrate different kinds of tests, including the computer-generated dynamic tests which are continuously designed and developed through R&D processes at RDSO.
- v. The agency should ensure that the format of tests designed and developed by RDSO is not altered to fit the architecture of their software. The architecture of their software should rather be adaptable to meet RDSO's requirements and befitting specified formats of Aptitude Test. This prerequisite shall be essential; otherwise, the basic nature of Aptitude Test, designed for assessing specific attributes of candidates, would be altered and the purpose of Aptitude Test shall be defeated.
- vi. The systems provided at the test centres should be screened, sanitised, and locked one day prior to testing so as to ensure that no mechanism is installed in the systems or servers that could compromise the contents of Aptitude Test.
- vii. The agency should be able to provide technical assistance whenever required by the SSO/JSO of the concerned Zonal Railway in digitisation of question paper creation, uploading test batteries, creating test bundles, proofreading tests for upload through VPN at

- (17)
- the data centre of the service provider, and dry run of the mock test before commencement of Aptitude Test, etc., and also random checking of auto-generated results.
- viii. The agency engaged by the RRC/Sr.DPO shall organise a dry run, including field details (number of sessions, test centre location, & number of candidates) to be discussed and mutually agreed upon by the SSO/JSO of the concerned Zonal Railway and the Service Provider, to showcase the digitized Aptitude Test on candidates' consoles exactly as per the specified format likely to be administered, followed by field trials for validation of computerised test and subsequent evaluation of candidates' performance in the form of result to the satisfaction of the SSO/JSO of the concerned Zonal Railway before the actual administration of Aptitude Test at the test centres and their evaluation.
- ix. The service provider shall install a mock test link on the website of the concerned zonal Railway/division to facilitate candidates' practice, in order to enhance transparency in the Aptitude Test, as per the directives of the RRC/Sr. DPO and the SSO/JSO of the concerned Zonal Railway. The mock test shall serve as hands-on practice for the candidates.

#### **12. Functions and Responsibilities of Service Provider engaged by RRC/Sr. DPO**

1. A standard Question Paper creation template will be provided by the service provider, and they will facilitate the SSO/JSO of the Zonal Railway in the digitization of the content of test batteries.
2. Provide technical assistance in the digitization of test contents at the office of the SSO/JSO of the concerned Zonal Railway using specific software and other necessary technical platforms, as deemed fit.
3. Provide technical assistance in the sealing of test contents by the SSO/JSO of the concerned Zonal Railway to ensure that no further changes are made to the test content until the testing is over.
4. Provide technical assistance as and when necessary to SSO/JSO of the Zonal Railway's in the creation of Aptitude Test Battery in encrypted form and their protection by the SSO/JSO of the Zonal Railway's password two days prior to the scheduled date of testing in close coordination with the scientific officer nominated for this purpose.
5. Facilitate proofreading by the SSO/JSO of the concerned Zonal Railway for this purpose to check how the test items will appear on candidates' consoles two days prior to the scheduled date of testing.
6. Upload password-protected contents in an encrypted form to the data centre of the service provider through Virtual Private Network (VPN), the specialised and secured communication channel of the service provider over the internet for transporting secured content from the office of the SSO/JSO of the concerned Zonal Railway to their data centre. This activity shall be done one day prior to the scheduled date of testing in the evening with the purpose of ensuring uninterrupted and timely delivery of secured test content to the test centre server through VPN via the data centre of the service provider.
7. Map (link) drives consisting of candidate-specific test-related information such as test centre information, virtual LAN information, roll number, name, and console password with the respective bundle (test battery) at each test centre. After mapping, the drive shall be locked to secure it one day prior to the date of testing.
8. On the date of testing, at the test centres, authorized IT Managers of the service provider shall download the assessment drive with the encrypted QP bundle.
9. After this, the primary server of the service provider shall be activated only when the QP bundle Password is shared with the SSO/JSO of the concerned Zonal Railway not more than half an hour before the commencement of testing.
10. At the test centres, authorized IT Managers of the service provider shall click on "Populate Bundle Password," and the QP bundle password shall automatically flow into the assessment servers in a masked manner. From a security perspective, the QP bundle

password will never be visible to anyone. The QP shall be decrypted only at the time of exam commencement, when the first candidate's request reaches the local test centre's assessment server.

11. Secured test content at candidates' consoles shall be accessed by candidates using their own credentials. The test items would appear in randomised manner for each candidate, and no two adjacent candidates shall receive the test items of a particular test in the same sequence. The time specified for each test shall be ensured by the service provider's system. On completion of each time-barred testing, responses of the candidates shall be automatically locked and saved by the service provider's system.
12. All the tests in the test battery shall be administered sequentially in a time-bound manner and with the provision of five minutes given to candidates in between to read the specific instructions pertaining to the forthcoming test and reading and understanding examples for that test. The sequence of administering different tests of the test battery and the allotted time for each of the tests shall be predetermined by the SSO/JSO of the concerned Zonal Railway at the mapping stage itself.
13. On completion of each testing session administered sequentially, "Click by Click" activities and candidates' responses (Audit Trail) shall automatically be locked in the primary server and command centre system of the service provider in an encrypted manner.
14. An authorised personnel (IT Manager), who will remain present throughout the date and time of testing, shall execute all activities pertaining to Aptitude Tests, besides addressing any IT issues in a candidate's console and the service provider's server.
15. On the date of examination, it shall be possible to view and monitor the entire activities related to Aptitude Test, including pre-assessment and post-assessment, through the "command centre platform" of the service provider that would be installed at the office of the SSO/JSO of the concerned Zonal Railway.

In addition to the above, the service provider shall ensure that:

- i) The authenticity and genuineness of candidates are verified using fool-proof means of identification, including biometrics and webcams, and also that candidates have logged in correctly before the commencement of testing; they must also provide an undertaking as prescribed by the RRC/Sr.DPO and affix their signatures wherever required. The candidate's console shall be kept ready with the login screen displayed.
- ii) All terminals for the display of tests and systems meant for capturing candidates' responses, as well as those provided to facilitate the testing process, are working properly. Any interruption or malfunctioning during the testing session is attended to promptly, and the candidate is compensated for the time loss on account of such interruption beyond their control. Additional terminals are kept readily available that could immediately be provided to a candidate in case their terminal malfunctions or gets interrupted for any reason, without any loss of testing time.
- iii) The venue is provided with uninterrupted power supply, adequate illumination, ventilation, and other basic utilities for the convenience of candidates.
- iv) No unauthorised person is allowed to enter the testing venue, and entry is blocked after the stipulated time mentioned in the call letters issued to candidates.
- v) One of the competent professionals of the service provider is present at the office of the SSO/JSO of the concerned Zonal Railway prior to testing to provide technical assistance to facilitate digitization, creation of bundles, sealing of bundles, proofreading, uploading and transmission of test materials to the data centre through VPN, and mapping of test materials, as designed, developed, and modified by the SSO/JSO of the Zonal Railway, on the technical

platform provided by them, and also on the date of testing to take care of any other essential activity related to the actual testing, as required.

vi) The testing shall be done using RAM; as such, no trace of test materials should remain available on any of the systems. Once the testing is over on a given day, the service provider will be required to certify that the test battery used for testing on a particular date has electronically been destroyed. This certificate (Annexure-VII) shall be submitted to the SSO/JSO of the concern Zonal Railway. In case the testing continues for more than one day, a fresh test battery in an encrypted form shall be transmitted from the office of the SSO/JSO of the concerned Zonal Railway with the help of an authorised and competent representative of the service provider, and the process will be repeated.

vii) In case of any discrepancy or untoward incident, the same should be apprised in the form of an incident report (Annexure VIII), duly signed by the service provider, to the concerned SSO/JSO of the Zonal Railway.

viii) If, due to any reason, the testing at any of the centres gets cancelled, then with mutual consultation among RRB/Sr. DPO, the SSO/JSO of the concerned Zonal Railway, and the service provider, a new date of testing shall be fixed.

### 13. Functions and Responsibilities of Psycho-technical Units

- 1) Assign one system as the CAE (Content Authoring Engine) server, another as the AEC (Assessment Exam Centre) server, and a third system for proofreading activities.
- 2) Verify the Question Paper Requirement (QRT) for meta and subject creation as provided by the service provider.
- 3) Create a mock link that replicates the actual Computer Based Aptitude Test (CBAT) to familiarize candidates with the test interface and procedure.
- 4) Prepare exam instructions in both Hindi and English, integrated with the test interface for candidate's guidance during the actual examination.
- 5) Prepare test specific instructions for all tests, integrated seamlessly with the test interface to guide candidates effectively.
- 6) Finalization of question paper images through proper extraction and formatting.
- 7) Proofreading of the question paper in PDF format.
- 8) Proofreading of the question paper as displayed on the candidate's console.
- 9) Test bundle (test batteries) are to be created, sealed, and transmitted in a password-protected and encrypted format via VPN to the service provider's main command centre one day before the scheduled test date. This ensures secure and timely delivery of the test content to the test centre server on the day of examination. If the Aptitude Tests cannot be uploaded through VPN, the testing will be considered cancelled until further notice, as no alternative method of transmission is permitted.
- 10) Set a drive password for the drive used to map candidate data.
- 11) On the day of testing, the SSO/JSO of the concern Zonal Railway shall enter the drive password one hour before the test to enable access to the candidates' data on the server.
- 12) On the day of testing, the SSO/JSO of the concerned Zonal Railway shall enter the bundle password half an hour before the commencement of testing, enabling the main command centre to transmit the password in encrypted form to the test centres.
- 13) To initiate result processing, the bundle password shall be shared in encrypted form for parsing.
- 14) Results will be processed by the service provider as per the criteria provided by SSO/JSO of the concerned Zonal Railway.

- 15) A blank key template in Excel format will be provided by the service provider through a secure Web Cabinet.
- 16) The JSO/SSO will fill in the test keys and submit them to the service provider via the secure Web Cabinet.
- 17) Reports with candidate's response in encrypted format shall be shared by TCS through web cabinet.
- 18) SSO/JSO of the concerned Zonal Railway to share decrypted report with TCS for custom report generation.
- 19) The service provider will share a provisional result for sample verification.
- 20) After the service provider provides the processed results, a sample check by the SSO/JSO of the concerned Zonal Railway to verify the correctness of the results as per specified criteria is to be done.
- 21) After the sample check by the SSO/JSO of the concerned Zonal Railway and intimation to the service provider, the service provider shall send the results to the RRC/Sr. DPO.
- 22) Result processing shall be carried out using a common mean and standard deviation for all candidates, as provided by RDSO to the SSO/JSO of the concerned Zonal Railway. Accordingly, T-scores shall be calculated.

**14. Functions and Responsibilities of RDSO**

- 1. Quality audit of Aptitude Tests for R&D purposes.
- 2. RDSO may also depute a representative at test centres for general supervision of online Aptitude Test.
- 3. Conduct periodic reviews of test batteries and follow-up research on the efficacy of Aptitude Test Batteries with reference to validation criteria.
- 4. Provide norms, time limits, etc., for CBAT.
- 5. Organise orientation training of Senior Scientific Officers/Junior Scientific Officers/Supervisors and supporting technical staff of Zonal Railways in professional/technical aspects of online Aptitude Tests (CBAT).

**15. APPLICATION OF NORMS AND STANDARDS IN EVALUATION OF PSYCHOLOGICAL TEST RESULTS**

- 1. Norms and standard as laid down from time to time shall be applied uniformly to all candidates for adjudging their suitability.
- 2. The cut-off for Tests are fixed on the basis of Normalized T-score. The Mean of normalised T-score is 50 and its SD is 10. The basic parameters required to calculate T-score are Mean and Standard Deviation calculated from normalized sample. The range of the T-score is normally in range of 20 to 80. The formula to calculate T-score is:

$$Tscore = 50 + 10 \left( \frac{X - Mean}{SD} \right), \text{ where } x \text{ is candidate's score}$$

The T-score for dummy subject for a test can be calculated as follows:

- i) Dummy subject score in Test 1 = 20.
- ii) Mean of Test 1 on normative sample = 14
- iii) SD of Test 1 on normative sample = 3

13

$$Tscore = 50 + 10 \left( \frac{20 - 14}{3} \right) = 50 + 10(2) = 70$$

Calculation of composite score is as follows-

As weightage to aptitude score is 20, the composite score of a dummy subject can be calculated as follows:

- i) Composite T-score of a candidate having 5 tests in a battery is = 300.
- ii) The max T-score a candidate can obtain having 5 tests in a battery is  $(80 \times 5) = 400$ .
- iii) The composite score out of 20 is:

\*Out of 400 Max. T-score candidate scored = 300

\*out of 20 score will be  $= 300 \times 20 = 15$

400

16. Information regarding the norms and cut-off marks of the Aptitude Tests is not publicly available. However, in case of any query arising under the RTI Act, the same information may be provided to the applicant under RTI by the designated PIO of RRC/Sr.DPO. Queries pertaining to such information may not be referred to RDSO, nor to the SSO/JSO of the concerned Zonal Railway.

GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS  
(RAILWAY BOARD)

No. E(NG)/2002/PM1/31

New Delhi, 22-08-2003

The General Managers,  
All Indian Railways

Sub: **Psychological Test in Departmental selections**

In terms of this Ministry's letter No. E(NG)/92/PM1/22 dt. 26.09.94, the serving staff are required to be subjected to psycho-test at the stage of promotion to the post of Switchman, ASM, Diesel/Elec. Asstts., Goods Driver, Motorman and at the stage of deployment of Drivers on Rajdhani/Shatabdi Express trains. In this Ministry's letter No. E(NG)/98/PM1/4 dt. 13.07.99 it was clarified that psycho test wherever prescribed will be of qualifying nature and part of the selection meaning thereby that a person who fails in the psycho test is not eligible to be included in the panel.

2. The scope of Psycho Test and its effect on the eligibility of staff for empanelment have been considered by a high level Committee. The recommendations of the Committee have been considered by the Board and following decisions have been taken:-

- (i) The Psycho Test should henceforth be called as 'Aptitude Test'.

So far as in-service employees are concerned, the Aptitude test will now be applicable at the stage of promotion as ASM, Diesel/Elec. Asstts. and Motorman (EMU/ MEMU/ DMU) and at the stage of deployment of Drivers on high speed trains running above 110 kmph. While the Aptitude test need not be given to Drivers of Rajdhani/Shatabdi Express trains running at lower speeds, the Drivers for deployment on non-Shatabdi/Rajdhani trains also running over 110 kmph should be subjected to the Aptitude Test.

- (iii) The Aptitude test should be given a weightage of 20% in the selection for promotion as ASM, Diesel/Elec. Asstt. and Motorman and should be integrated in the selection proceedings. In other words, the Aptitude test will no more be of qualifying nature.

2.1. It has been decided further that weightage of 20 marks, that is required to be given to Aptitude test in the selection for promotion to the above categories should be given in lieu or by bifurcating the heading/marks under the heading Personality, address, leadership and academic/technical qualifications. Accordingly in the case of selection for promotion as ASM and Diesel/Elec. Asstts. covered by procedure laid down for general (selection) posts, the existing heading "Personality, address, leadership and academic/technical qualifications should be bifurcated as under:-

	<u>Max. Marks</u>	<u>Qualifying Marks</u>
i) Academic/technical qualifications.....	10	Nil
ii) Aptitude Test.....	20	Nil

In the case of selection for promotion as Motorman the existing heading "Personality, address, leadership and academic/technical qualifications should be deleted and substituted by the following:-

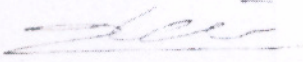
	<u>Max. Marks</u>	<u>Qualifying Marks</u>
"Aptitude Test .....	20	Nil

3. It has also been decided that only the staff who clear the written test held as part of the selection should be subjected to Aptitude Test.

4. The Indian Railway Establishment Manual should also be amended as in the ACS No. 149 enclosed.

Please acknowledge receipt.

Encl: As above.

  
**(J.S. Gusain)**  
 Joint Director, Estt.(N)  
 Railway Board

No.E(NG)I/2002/PMI/31

New Delhi. Dated 22-08-2003

Copy forwarded to:-

1. The General Secretary, All Indian Railwaymen's Federation, Room No.253, Rail Bhavan, New Delhi (35 copies)
2. The General Secretary, National Federation of Indian Railwaymen, Room No.256-F, Rail Bhavan, New Delhi (35 copies).
3. All Members, Departmental Council and National Council and Secretary, Staff Side, National Council, 13-C, Ferozeshah Road, New Delhi (60 spares).
4. The Secretary General, Federation of Railway Officers Association, Room No 256-A, Rail Bhavan, New Delhi (5 spares)
5. The Secretary General, Indian Railway Promotee Officers Association, Room No.268, Rail Bhavan, New Delhi (5 spares).
6. The General Secretary, All India RPF Association, Room No.256-D, Rail Bhavan, New Delhi-110001.
7. The Secretary, RBSS Group 'A' Officers Association, Rail Bhavan, New Delhi
8. The Secretary, RBSS Group 'B' Officers Association, Rail Bhavan, New Delhi
9. The Secretary, Railway Board Ministerial Staff Association, Rail Bhavan, New Delhi
10. The Secretary, Railway Board Group 'D' Employees Association, Rail Bhavan, New Delhi.

Copy to:-

*M. Jeyaraman*  
for Secretary/Railway Board

PSs to MR, MSR(B), MSR(A).

PPSs to CRB, FC, MS, MM, MT, ML, ME, Secretary.

PPSs to all Additional Members, Advisers, DG/RHS and DG/RPF.

PSs to all EDs/JSs and IG/RPF.

D(OL), DPC-I&II, DE(Res), DE(G), D(III), D(H&FW), DE(L), JDE(N), JDE(N)II, DF(R)I&II, JDE(Rep)I&III, JDE(D&A), JDE(LR), DD(Code Revision), DD(Health), DDE(N), DDE(LR)I, US(A), DDV(A&P), DDE(Rep)II, DD(OL)I&II, E(NG)II, E(Rep)I,II&III, E(SCT)I&II, PC-III,IV&V, E(P&A)I&II, CE-I,II&III, Sec.(E), Sec.(ABE), E(MPP), E(G), Health Branch, A/C-III Code Revision Cell

INDIAN RAILWAY ESTABLISHMENT MANUAL, VOLUME I, 1989 EDITION

Section 'B', Chapter II – Promotion of Group 'C' Staff

Advance Correction Slip No. 149

I. Insert the following as Note (v) after the existing Note (iv) below the existing para 219 (g):

"(v) in the case of selection for promotion as Motorman, substitute the following for the existing heading 'Personality, address, leadership and academic/technical qualifications' in the table below para 219 (g):-

	<u>Max</u> <u>Marks</u>	<u>Qualifying</u> <u>Marks</u>
" Aptitude test	20	Nil

II. Insert the following as Note (iv) after the existing Note below para 219(j):

"(iv) In the case of selection for promotion to the post of Diesel/Elect. Asstts. and ASMs, the heading (2) above shall be bifurcated as under:-

	<u>Max. marks</u>	<u>Qualifying marks</u>
(a) Academic/ Technical Qualifications -	10	Nil
(b) Aptitude Test -	20	Nil

(Authority: Ministry of Railways letter No. E(NG)/2002/PM1/31 dt. 22-08-2003)

\*\*\*\*\*

Government of India/Bharat Sarkar  
Ministry of Railways/Rail Mantralaya  
(Railway Board)

No.E(NG)I-2002/PM1/31

New Delhi, dated 29-03-2005


The General Managers(P),  
All Indian Railways,  
(As per standard list).

**Sub:-Psychological Test in departmental selections.**

As the Railways are aware in terms of instructions contained in this Ministry's letter of even number dt.22.08.2003, Psychological Test renamed as Aptitude Test has been given a weightage of 20% in the departmental selections for promotion as ASM, Dsl./Elec. Asstts. and Motorman and has been integrated in the selection proceedings with the stipulation that the Aptitude Test is not of qualifying nature.

2. The Advisory Committee constituted by the Ministry of Railways to inter-alia advise and guide the Psycho Technical cell of RDSO in the area of Aptitude Tests has recommended that the Railways may switch back to the old system of multiple cut off and qualifying status for Aptitude Test with the existing system of adding marks of aptitude test with written examination continuing for deciding the eligibility for empanelment amongst those candidates who score the minimum cut-off marks and above in all the sub tests of the Aptitude Test. This has been considered by the Board and the recommendations of the Advisory Committee accepted. The minimum cut-off marks will be as may be decided by RDSO.
3. The IREM, Vol.I,1989 is accordingly amended as in the ACS No. 171 enclosed.
4. Please acknowledge receipt.

Encl: ACS No. 171.

  
(J. S. Gusain)  
Director Estt.(N)  
Railway Board.

---2/-

भारत सरकार GOVERNMENT OF INDIA  
रेल मंत्रालय MINISTRY OF RAILWAYS  
(रेलवे बोर्ड RAILWAY BOARD)

308

JSOP1 EOP/1  
23.6.25

No. E(NG)/2021/PM1/8 (E-3362545) Now Delhi, dated 23-06-25

The Director General,  
RDSO,  
Lucknow

**Sub: Computer Based Aptitude Test in departmental promotions.**

Ref: Your letter no. PT/PP/1.1.7 dated 30.05.2025.

\*\*\*\*\*

Please refer to your above mentioned letter on the above subject. The matter has been considered in Board's office and it is recommended that Computer Based Aptitude Test (CBAT) may be adopted for the categories of Assistant Loco Pilots (ALPs) and Station Masters (SMs) under departmental promotion quota as it is quicker and easier to administer. However, at present RDSO is advised to take a suitable decision as per their level of preparedness and capacity.

Digitally signed by  
Ajay Goyal

(Ajay Goyal) 23-06-2025

Deputy Director-III/ E(NG)01

Railway Board

E-mail: ajay.2097123@gov.in

Ph. No. 47224/01123047224

Copy to :

(i) General Manager(P)

South Western Railway, Hubli

भारत सरकार GOVERNMENT OF INDIA  
रेल मंत्रालय MINISTRY OF RAILWAYS  
(रेलवे बोर्ड RAILWAY BOARD)

KOB No. 61

S.No 232

No.E(NG)I/2002/PM-1/31

New Delhi, dated April 15, 2019

The General Managers,  
All Zonal Railways,  
(as per standard mailing list)

**Sub: Reviewing the existing mechanism of Psycho test on the basis of Multiple cut-off for Assistant Loco Pilots (ALPs).**

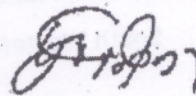
As the Railway administrations are aware, instructions regarding Psychological tests, subsequently renamed as Aptitude Tests have been issued from time to time.

The Ministry of Railways (Railway Board) had constituted a Committee to review the existing Mechanism of Aptitude Test on the basis of multiple cut off for ALPs. The Committee has since submitted its report and the following recommendations have been accepted by the Board -

- (i) Present system of aptitude testing with multiple cut-off and its qualifying nature should continue for Direct Recruitment through RRBs, with weightage of 30% of Aptitude Test as being done presently;
- (ii) For Departmental selections and promotions at the entry stage of Safety Category staff including ALPs, aptitude test should be qualifying in nature with the suitability criteria of multiple cut-off with weightage of 20% for Aptitude Test as being done presently;
- (iii) Maximum three attempts may be allowed to in service employees after a gap of minimum three months between each to become eligible for induction into the Safety Categories posts.

The aforesaid recommendations of the committee may be noted for strict compliance.

Please acknowledge receipt.



(P.M. Meena)  
Deputy Director-II/E(NG)I  
Railway Board

Annexure V

Log book of discrepancy in test format

S.No.	Discrepancy noticed	Details

Nominated member from RRC/ Sr. DPO

Annexure VI

**Certificate of confidentiality**

I, -----, in the capacity of ----- as a responsible representative of ----- (Exam conducting agency/service provider, engaged by RRB/----- to facilitate aptitude testing in CBT mode) do hereby certify that the aptitude tests designed and developed by RDSO has neither been decrypted nor stored in any of our system at the data centres and test centres nor retrieved in any form nor revealed by any member of our company nor anyone else has been allowed to do so at any stage of the pre testing, testing and post testing activities. It is also certified that the test items of the aptitude test battery or its any part are nowhere in any of our systems and the consoles of the candidates after the testing is over.

**Exam conducting agency / Service provider**

**Certificate of electronic destruction of the test battery used**

The undersigned do hereby certifies that the test battery used on date----- has been electronically destroyed and no trace of the test is left on any of the systems.

**Exam conducting agency/ Service provider**

**Counter signed by nominated member from RRC/ Sr. DPO**

Annexure VIII

Incident Report

Date	Time	Incident S.N	Incident
		1	
		2	
		3	
		4	
		5	
			Incident report sent to -----
Centre Head		Nominated member from RRC / Sr. DPO	