



PBC No. 113 / 2025
RBE No. 16 / 2025

दक्षिण रेलवे Southern Railway
प्रधान मुख्य कार्मिक अधिकारी कार्यालय
Office of the Principal Chief Personnel Officer
प्रधान कार्यालय, कार्मिक विभाग, चेन्नै-600003
Headquarters, Personnel Department, Chennai-600003

सं/No: P(R) 673 / P / Training / Vol.VI

दिनांक/Dated: 03.06.2025

All PHODs/ DRMs/ CWMs/ CEWE/ CAO/ CPM/ PDA/ Dy.CPOs/ Sr.DPOs/ Secy to GM,
Chairman/RRB/MAS,TVC, Addl.Registrar/RCT/MAS, Secretary/RRT/MAS,
Principal MDZTI/TPJ, SRCETC/TBM, ZETTC/AVD,
DPOs/SPOs/WPOs/APOs of HQ/Divisions /Workshops/Units.

**विषय/Sub:Revised Training Modules of Non-Gazetted Staff of Traffic
Department.**

A copy of the Railway Board's letter No. 2025/E(Trg.)/41/1 dated 19.02.2025
alongwith enclosures on the above subject, is enclosed for information, guidance, and
necessary action.

Railway Board's letter dated 04.08.2021 (RBE No. 58/2021) referred to therein has
been circulated as PBC No. 139 / 2021.

संलग्नक/Encl. 129 pages

**CHILAKALAPUDI
ANJANIKUMAR**

Digitally signed by
CHILAKALAPUDI ANJANIKUMAR
Date: 2025.06.03 15:46:12 +05'30'

सहायक कर्मचारी संबंधी अधिकारी/Asst Personnel Officer / IR & Trg.
कृते प्रमुकाधि/For Principal Chief Personnel Officer

प्रतिलिपि/Copy to: The General Secretary/SRMU

The General Secretary / DREU

The General Secretary/AISCTREA

The General Secretary/AIOBCREA

The General Secretary/NFIR

IT Section/PB/HQ - to upload in the SR website.



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



वसुधैव कुटुम्बकम्
ONE EARTH • ONE FAMILY • ONE FUTURE

No. 2025/E (Trg.)/41/1

New Delhi, Dated:As signed

The General Managers
All Indian Railways/PUs,
Metro Railway/Kolkata
CAO/DMW/Patiala
CAO/COFMOW/New Delhi
ED/CAMTECH/Gwalior

The Director Generals/Director,
All Centralised Training Institutes
RDSO,Lucknow

Sub:- Revised training Modules of Non-Gazetted Staff of Traffic Department

Vide Board's letter no. **E(MPP)/2019/3/47 Pt dtd. 04.08.2021 (RBE No.58/2021)** Training modules for non-gazetted staff of Traffic Department were circulated.

2. The training modules have since been reviewed in light of the evolving technological and safety environment etc. After a comprehensive assessment, revised training modules (including KAVACH training sub-modules)as applicable for non-gazetted Staff of Traffic Department have been developed.

2.1 Further, training content for imparting training on KAVACH sub-modules has also been prepared by CoE/IRISET for training of traffic staff.

2.2 The revised training modules as well as training content for KAVACH training sub-modules applicable for non-gazetted Staff of Traffic Department have been approved by Board (M/O&BD)&(DG/HR).

3. Therefore, the revised training modules (alongwith training content for imparting training on 'Kavach' to traffic staff) should be exclusively incorporated and used for the training of the non-gazetted staff of Traffic Department.

4. The **Revised Training Modules(as applicable) for non-gazetted staff of Traffic Department** have been scanned and uploaded under MPP Training Circulars on 'Indian Railways' website and can be viewed or downloaded from railnet.

Kindly acknowledge receipt.

Signed by

Jitendra Kumar

Date: 19-02-2025 16:53:17

(Jitendra Kumar)

Dy. Director/Estt. (Training)

Railway Board

Ph. : (011) 23047251

Copy to:

- 1) The General Secretary, NFIR, 3 Chelmsford Road, New Delhi for information (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).
- 2) The General Secretary, AIRF, 4 State Entry Road, New Delhi for information (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).
- 3) The Secretary General, FROA, R.No.256-A, Rail Bhavan, New Delhi for information (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).
- 4) The Secretary General, IRPOF, R.No.268, Rail Bhavan, New Delhi for information (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).
- 5) All Members, Department Council & Secretary Staff side National Council 13-C, Feroz shah Road, New Delhi (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).
- 6) The Secretary General, AIRPF Association, Room No.256-D, Rail Bhavan, New Delhi (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).
- 7) General Secretary, All India SC & ST Railway Employees Association, 171/B-3, Basant Lane Railway Colony, New Delhi (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

Signed by

Sadhna Aggarwal

Date: 21-02-2025 11:19:24

For Principal Executive Director (IR) /Railway Board

Copy to:

- i) PS & ED(PG) to MR, MoSR (S) & MoSR (R)
- ii) PSO/Sr.PPS to CRB, MF, M(Infra.), M(TRS), M(O&BD), DG(HR), DG(RHS) & DG(RPF)
- iii) Sr.PPS/PPS/PS to AM(Budget), AM(CE), AM(C&IS), AM(Comml.), AM(E&HM), AM(Fin), AM(HR), AM(L&A), AM(Mech.), AM(Plg.), AM(Project), AM(PU), AM(RS), AM(Sig.), AM(Staff), AM(Traction), AM(T&C), AM(Tele), AM(TT), AM(Works), PED(Vig.), PED(Safety), PED(Coaching), LA,
- iv) ED(Plg.), ED(Accts.), EDCE(B&S), EDCE(G), EDCE(Plg.), ED(CHG), ED(CC), ED(C&IS), ED(E&R), EDEE(Dev), EDEE(G), EDEE(M), EDEE(RS), EDE, ED(RRB), EDE(N), EDE(Res), EDF, EDF(B), EDF(X)I, EDF(X)II, ED(H), JS(C), EDME(Chg.), EDME(Fr.), EDME(PU&W), ED(PC)I, ED(PC)II, EDRE, ED(Safety), ED(Safety)-II, IG./RPF(Hqs), ED(Sig.), ED(SP), EDRS(G), EDRS(S), ED(TD), EDTC(R), EDCE(P), ED(PM), ED(FM), EDPG, EDTT(F), EDTT(S), EDV(E), EDV(Elect), EDV(T), EDVE(S), ED(W).
- v) Chief Commissioner of Railway Safety, 3rd Floor, TA Office, State Entry Road, New Delhi-55.
- vi) E(NG)I, E(NG)II, E(G), F(E)I, F(E)II, F(E)III, E(SCT)I, E(SCT)II branches of Railway Board.

Room No. 27A, Ground Floor, Rail Bhawan, New Delhi-110001

Training Module for Station Master Initial/Promotion

Department	Transportation
Course No.	TI/TP-1
Category	Station Master Initial/ Promotion
Stage	Induction through RRB or Promotion through Departmental Examination
Duration	90 working days / 540 Hours

Module No.	Description	Hours	Days
TI/TP-1/1	Foundation Course	12	02
TI/TP-1/2	Transportation -1 (Lower Transportation)	240	40
TI/TP-1/3	Transportation - 2 (Commercial & Accounts)	66	11
TI/TP-1/4	Transportation - 3(Higher Transportation)	30	05
TI/TP-1/5	Transportation - 4(Other Departments)	36	06
TI/TP-1/6	Safety Management	18	03
TI/TP-1/7	Establishment	24	04
TI/TP-1/8	Information Technology	30	05
TI/TP-1/9	Ethical leadership & Soft Skills	18	03
TI/TP-1/10	Field training (6 Days x 6 Hrs.)	36	06
TI/TP-1/11	Control Training (1 Day x 6 Hrs.)	06	01
TI/TP-1/12	Examination	24	04
	TOTAL	540	90

TI/TP-1/1 FOUNDATION COURSE	
TI/TP-1/1.1	Admission Formalities
TI/TP-1/1.2	History and Development of Indian Railways, its prime objectives-Vision
TI/TP-1/1.3	Organisational Set up of Indian Railways – Railway Board, Zonal Railway, Divisional Level & Station/Depot Level
TI/TP-1/ 1.4	Various Departments of Indian Railways – Their functions – an Introduction
TI/TP-1/ 1.5	Organisational Set up of Traffic Department – Role of Operating, Commercial Department
TI/TP-1/1.6	Control Department – Structure, Role, Importance and Functions in Operations.
TI/TP-1/1.7	Safety Department – Role, Importance and Functions in Railway Operations, CRS: Organisation, Importance and Functions.
TI/TP-1/1.8	Official Language Implementation – Importance – Various Incentives for qualifying in Hindi proficiency
TI/TP-1/2 TRANSPORTATION -1	
TI/TP-1/2.1	Introduction, G&SR, BWM, AM, OM, WTT, SWR, Chapter No. 01 & 02 of G & SR, Rules applying to Railway Servants
TI/TP-1/2.2	Signals: • Evolution of Signals • Fixed Signals in Multiple Aspect Territory • Distant, Inner Distant, Combination of Distant Signal with Last Stop Signal & Gate Stop Signal • Home, Routing Home • Starter, Inter Starter, Advanced Starter, Calling-on Signal, Shunt Signal – Types • Gate Stop Signal – with & without ‘G’ Marker Intermediate Block Stop Signal • All Hand Signals & their Occasions • Fog/Detonating Signal, Fog Signalling, Warning Signal & Demo • Introduction, Kavach and its Sub Systems : Salient features of Kavach , Components of Kavach, Kavach arrangements in station at a glance, Loco Kavach at a glance, Radio Frequency Identification (RFID) Tags, Working Principle
TI/TP-1/2.3	Isolation & Interlocking
TI/TP-1/2.4	Indicators – Point, Trap, Route & Shunting Permitted Indicator
TI/TP-1/2.5	Boards – Warning Boards (Passenger, Goods, Shunting & Station), Shunting/Block Section Limit Board, Caution & Termination Indication Boards, Sign-A & B Boards, etc
TI/TP-1/2.6	Classification of Stations, Minimum Equipment of Signals in Multiple Aspect Area, Station Section, Block Section-Conditions for granting Line Clear, Station Diagrams with MAUQ/MACL Signals at Different Classes of Stations
TI/TP-1/2.7	Conditions for taking ‘off’ Signals
TI/TP-1/2.8	Points & setting of Points,
TI/TP-1/2.9	Failure of Points – Use of S&T(NM), S&T(DN), Hands on Training on Crank Handle, Clamping & padlocking of Points, Use of Through bolt & cotter, etc

TI/TP-1/2.10	Signal Failure • Failure of all Signals-Reception & Departure Stop Signals • Passing Intermediate Block Stop Signal at 'ON' • Passing Gate Stop Signal at "ON" • Reception on Obstructed/ Non-Running/Non-Signalled Road • Despatch from a Non- Running / Non-Signalled Road, a line out of group of lines with Common Starter
TI/TP-1/2.11	Panel, Panel buttons and their use, Lever frame – different levers and their use. RRI, EI & VDU – Parts & Functions – Hands on Training on Use of Lever Collar, Slide Pin, Button Cap and Key of SM's slide, Block Instrument Key, caution plate, no voltage plate/button collar • Normal Reception & Despatch • R&D during Signal Failure, Point Failure, Panel Failure • Shunt Movements
TI/TP-1/2.12	Working of Trains generally : • Systems of working • Conditions and precautions for granting line clear and clearing back section • Important papers, P.No. Sheet, TSR and precautions while using them. • Working of trains in Thick and foggy weather. • Procedure for draw ahead of train up to fouling mark when fouling mark is not clear • Procedure for draw ahead of train up to last stop signal when train waiting for line clear • Engine Whistle codes • Procedure for put back of signals • Standard Time • Speed-Maximum Permissible Speed & Booked Speed • Time Table (PTT & WTT),Speed over Facing Points • Engine Pushing, Pushing back in absolute and automatic block system • Trains without Guard / BV / Guard & BV • Whistle Codes & Bell Codes • Working of Material Train & Track Maintenance Machine • Station Master Operation Cum Indication Panel (SM-OCIP): Introduction to SM-OCIP, Provisions in Station Master Operation Cum Indication Panel ,Manual SOS generation/ Cancellation, SOS acknowledgement by SM ,Reporting of Kavach Failures, Variations in SMOCIP in different makes, • Operational Modes of Onboard Kavach for Version 4.0: Driver Machine Interface (DMI) at a glance, Different Types of Operational Modes of Onboard Kavach for Version 4.0, Mode Transitions in Kavach Ver 4.0, Features available at different Operational Modes in Kavach.
TI/TP-1/2.13	Control & Working of Stations : • General duties • SWR-Contents, P.Way, Rule Diagram & OHE sectioning diagram-Rules for working in Electrified Section- Appendix 'G' • Shunting – Definition, Types, Control & Supervision of Shunting, Shunting on Gradients, Shunting Authorities, Shunting Techniques to maintain

I/3117998/2025	fluidity in Big Yards-Coaching/Goods • measures to prevent accident during shunting movement • ODC movement, Marshalling • Securing of Vehicles /Engine, Escaping of Vehicles– Stabling at Station, Train Stalled in Mid section • Ghat rules – Slip siding and catch siding
TI/TP-1/2.14	Duties of SM in case of - • person run over cases, Cattle run over cases • Obstruction in block section • Patrolman delayed in block section, Train delayed in block section, Rail fracture, Loco pilot reporting any abnormal condition in block section, OHE failure, Traffic, Engineering, Power Block • Track machine, Passing of train without tail lamp / tail board • In case of serious accident, Signal passing at danger by Loco Pilot • Bursting of points, Fire on train • Breach of block rule, Sabotage and train wrecking • Threat perception, Working of Tower wagon, Trolley, Motor trolley, lorry. • Staff / passengers creating nuisance in station premises. • Safety equipments, boards, passenger amenities available at station • Registers maintained at station. • Safety counselling and monitoring, Safety categorization, safety meetings • Exchanging of hand signals with train crew • Responsibility of Station Master regarding punctuality • use of crank handle, Overhauling, cable maggering, NI work and precautions, Cross over testing, crank handle testing, use of cross over siding working
TI/TP-1/2.15	Working of Level Crossings – Types of LC, Classification– Working at Manned Non-Interlocked LC-Failure of LC, Abnormal working at LC.
TI/TP-1/2.16	Working of Trains in Electrified Sections - Parts of OHE-Power Supply arrangements, Traction Power Control Organisation - Power Blocks – Kinds – Registers, SCADA
TI/TP-1/2.17	Automatic Block System – S/L & D/L - • Kinds of Signals • Salient Features – Sequence of Aspects of Automatic Signals, Establishing Direction of Traffic, etc • Passing Signals at 'On' • Various Authorities to Proceed • Abnormal Occasions – Panel Failure, Prolonged failure of Signals, Failure of Both Signal & Communication, Sending Relief Engine, Single

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	line working on D/L, Movement against DOT, etc • Shunting in Automatic Territory • Competency Certificate • Modified Semi Automatic Stop Signal Working
TI/TP-1/2.18	Practice of Forms in Unusual working
TI/TP-1/2.19	Works of Short & Long duration-Protection at site, Engineering Indicators, Cause ways
TI/TP-1/2.20	Patrolling of lines – Kinds of Patrolling, SM's responsibilities
TI/TP-1/2.21	Line Block-Requisition, Imposition, Extension, Removal
TI/TP-1/2.22	Introduction to Trolley, Lorry, Motor Trolley, etc – Competency Certificate – Issue & Renewal, etc
TI/TP-1/2.23	Working of Trolley, Lorry , OHE Ladder Trolley, Cycle Trolley
TI/TP-1/2.24	Working of Motor Trolley,
TI/TP-1/2.25	Caution Order – Preparation, Issue & Circumstances

BLOCK WORKING RULES	
TI/TP-1/2.26	System of Working – Definition, Different Systems – Introduction
TI/TP-1/2.27	Order of Precedence of Trains & Control Working
TI/TP-1/2.28	Means of Communication
TI/TP-1/2.29	Essentials of Absolute Block System
TI/TP-1/2.30	Documents connected with Block Working – Block Competency Certificate, Train Signal Register, PN Book
TI/TP-1/2.31	Block Instrument/Track Circuit/Axle Counter & BPAC – UFSBI (single and double line) Objective of provision
TI/TP-1/2.32	Bell Code Signals-Types, significance, follow up action
TI/TP-1/2.33	Various Authorities to Proceed – S/L & D/L
TI/TP-1/2.34	Block Instruments : • Single line and Double line • Parts & Functions • Precautions before granting/asking Line Clear, before closing the Block Section, Testing before Taking over charge • Failure Occasions – Restoration by S&T Officials, SMs themselves, DSTE/ASTE • Hands on Training – Normal working, Normal Cancellation, Push back Cancellation & Testing
TI/TP-1/2.35	Total Interruption of Communication on Single & Double line.
TI/TP-1/2.36	Temporary Single line working on Double Line
TI/TP-1/2.37	Train dividing Train parting
TI/TP-1/2.38	Authority to Proceed without Line Clear-Issue & circumstances, Sending assisting engine in obstructed Block section
TI/TP-1/2.39	Block Failure – Follow Up Action
TI/TP-1/2.40	Filling up of Operating Forms – Hands on Training
TI/TP-1/2.41	Hands on Practice in Model room
TI/TP-1/2.42	Simulator Training

I/3117998/2025/TP-1/2.43	Trains Clerk: GRS, Trains Clerk Duties, Registers, In Yards and Control Office Train Papers – RJB, CTR, VG, LTM Stock Report – Coaching & Freight- Yard & Control Office Various Registers, Forms & Memos Various types of Rolling Stock –Coaches & Wagons, Locos–Nomenclature, Features & Numbering Pooling of Wagons, Interchanging of Rolling Stock Coaching & Wagon Census Marshalling Yard Preferential Traffic Schedule, Operating Restrictions Goods Train Operation – Train Ordering, Various Types of Goods Trains, etc Booking Crew for Trains, Crew Management in IR Operating Indices – Passenger, Freight & Engine usage
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TI/TP-1/3		TRANSPORTATION -2
Coaching Theory		
TI/TP-1/3.1	Organizational Structure, Role and Importance of Commercial Department. Functions of Different branches, Books of Reference	
TI/TP-1/3.2	Tickets : kinds, Check & collection of tickets Disposal of tickets, Irregular travelling, causes and remedial measures, DTC Book & general idea of posting Other books & register, Definition of non issued tickets, accountal Disposal of non issued , tickets, registers maintained, Preparation of daily, monthly, returns its submission Withdrawal of money from station earning	
TI/TP-1/3.3	Different kinds of Military Warrants, Concession Vouchers & Certificates	
TI/TP-1/3.4	Break Journey Rules	
TI/TP-1/3.5	IRCA Concessions	
TI/TP-1/3.6	Reservation of Seats & Berths – PRS, block booking, YTSK, JTBS, STBA & Flexi fare, types of various passenger train services	
TI/TP-1/3.7	Refund Rules – Normal & Abnormal conditions	
TI/TP-1/3.8	Booking & detection of Luggage, Booking of Animals & Birds – IRCA Coaching Tariff	
TI/TP-1/3.9	Acceptance & Booking of Parcels - IRCA Coaching Tariff, Preparation & Disposal of PWB, Rebooking of Parcels	
TI/TP-1/3.10	Responsibility of Railways as carrier of Luggage, Parcels, etc – Common Carrier liability	
TI/TP-1/3.11	Forwarding Note – Execution	
TI/TP-1/3.12	Public Complaints, Claims - causes & prevention	

I/3117998/2025/TP-1/3.13	Railways Act, 1989 – Important Sections Dangerous & Explosive Goods- Prohibition of Carriage in Passenger Coaches Running Train Theft, Accidents, Untoward Incidents, ICC Pulling Catering And Vending Arrangements – Co-Ordination by TE/TTE Fake Note Detection-Demonstration Charting, Man Machine Interface Various Checks Conducted To Eradicate Ticketless Travel Irregular Travelling & Case Studies of All Sorts Various Returns to be submitted by Ticket Examiner & Coaching Returns. Error Advices, Outstanding & Clearance Of Outstanding Duties of a Ticket Examiner, Commercial, Goods and Parcel, ECRC
TI/TP-1/3.14	Passenger Amenities, Station Cleanliness, Petty Repairs, Recoupment of Imprest Cash
TI/TP-1/3.15	UTS – Hands on Training, UTS and PRS, Parcel Management system
Goods Theory	
TI/TP-1/3.16	Types of Wagons – Carrying Capacity, Forwarding notes, its types and importance, Working hours and business hours and restrictions.
TI/TP-1/3.17	Routing & Rating of Goods Traffic,
TI/TP-1/3.18	PLM & Weighment of Goods, PTO and section 70 and 71, Ban and Restrictions Wagon demand and register of WRF and W/L and T/L conditions Allotment and supply of wagons Lump sum deposit WRF its forfeiture and refund.
TI/TP-1/3.19	Movement of Wagon Loads, Priority Schedule, Weigh Bridge- Weighment & Re-Weighment, Punitive Charges
TI/TP-1/3.20	Booking & Carriage of Military Traffic, Dangerous Goods
TI/TP-1/3.21	Loading of Wagons, Sealing, Riveting & Locking
TI/TP-1/3.22	Unloading of Wagons, Reporting of Discrepancies, Maintenance of DD Register
TI/TP-1/3.23	Open Delivery & Assessment Delivery
TI/TP-1/3.24	Rebooking & Diversion
TI/TP-1/3.25	Unconnected & Unclaimed Goods, their disposal
TI/TP-1/3.26	Delivery in the absence of RR
TI/TP-1/3.27	Demurrage, Wharfage and Stacking procedure
TI/TP-1/3.28	Sidings, Liberalized Siding Policies
TI/TP-1/3.29	Various Goods returns.
TI/TP-1/3.30	Market prospecting organization, Freight Incentive Schemes & Transportation Products, Container Service
TI/TP-1/3.31	FOIS – TMS – Hands on Training
Traffic Accounts	

TI/TP-1/3.32	Under charges, Over charges – Disposal & delivery of Parcels Outstanding & clearance. Non-Issued Tickets, Obsolete Tickets, Error Sheet, DTCB, Proof Book Coaching Returns & Balance Sheet Preparation of Goods Returns including Balance Sheet & submission EDP, GST Balance sheet: UTS, PRS, Goods, Parcel, e-balance sheet etc. PCDR, Different Books Maintained for Accountal and Maintenance of ICV Books in Reservation Centre, Maintenance of dead stock register Balance sheet preparation & its submission HOC/TOC of Cash & Vouchers Various PRS Statements – Daily, Monthly & Periodical Error Advice, Inspection by TIAs, Raising of Debits, etc Cash Remittance- Bank & Cash Office.
TI/TP-1/4	TRANSPORTATION -3
TI/TP-1/4.1	Speed and Running Time, Section capacity, Throughput, Goods/Passenger train operation, Wagon Turn Round, Operating Statistics, Loco utilization, Planning - Significance and types of planning, planning procedure, planning for increasing the line capacity, planning for yard remodelling, ESP, SIP, DPR. IRPSM
TI/TP-1/4.2	Staff Management, Bio-Data Register, Roster assigning
TI/TP-1/4.3	Various Freight Incentive Schemes and Advance Transportations
TI/TP-1/4.4	Various Registers maintained at Stations – Operating, Safety, Commercial & Personnel, Public Complaints, Fraud and embezzlement, Advertisement at station
TI/TP-1/4.5	Contract Management – Overview, Guiding Principles, Supervision, Penalties
TI/TP-1/4.6	Role of Supervisors, Counselling, Protocols, FAQ related to Kavach
TI/TP-1/4.7	Inspection – Types, objective, follow-up actions.

TI/TP-1/5	TRANSPORTATION -4
TI/TP-1/5.1	S&T: Specific duties under G&S.R Specific duties under Block Working Rules Duties of S&T Staff – Co-ordination with other Departments, Maintenance Schedule, etc Schedule of Inspections - ESM, JE, SE, SSE, ASTE (primary concept) Schedule of POH for Various Signalling Gears, Points/Cross over testing Registers, Forms & Memos: • Relay Room Double Key Lock Register • Block Instrument Double Key Lock Register • Signal, Block, Failure & Inspection Register • S&T (NM), S&T (T/351) • Failure Advice & Joint Restoration Memo • Route Release Memo, etc Joint Inspection of Points & Crossings with JE/SE/P.Way – Schedule, Observations, Follow up Signal Sighting Committee – Sighting Distance of various Signals- Focussing, Shifting of signals Panel/RR/SSI - Resetting of Route/BPAC, Data Logger - Use in failure restoration & Maintenance ESP, SIP
TI/TP-1/5.2	Engineering: Specific duties under G&S.R Duties of P.Way Staff – Co-ordination with other Departments, Maintenance Schedule, etc Basics about Track - Types of Routes, Track-Wheel Interface, Sleepers, Ballasts, etc Schedule of Maintenance for Various P.Way Officials – Keyman, Gang Mate, JE/SSE/P.Way, ADEN, DEN, etc Elementary Knowledge of All Types of Track Machines, Types of Blocks & Working of Track Machines, Types of Track Defects – Slack/Rough running, Lurch, Buckling, etc Types of Engineering Works - CTR, DSW, TRR, TSR Station Yard Maintenance-Removal of rank vegetation, Prevention of trespassing, Drainage Improvements in Track circuited yards Blocking of Running Lines, Precautions, Blocks – Types, Integrated Block & Corridor Block, Short and Long duration works, Action in case of weather warning messages Subordination of Gang staff within station premises - Exchange of messages, Fog signalling

TI/TP-1/5.3	Electrical: Specific duties under G&S.R Duties of OHE Staff – Co-ordination with other Departments, Maintenance Schedule, etc Basics about AC Traction, Elementary Knowledge of OHE Schedule of Maintenance for Various OHE Officials
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I/3117998/2025

	Types of Power Block-Precautions & Procedures, Working of Tower Wagon Visit to Traction Power Controller Office, SCADA OHE Sectioning Diagram, FP, SSP, SP, Sector, Sub-Sector, Elementary and Neutral sections, Reporting of abnormalities and action to be taken. Operation of Isolator Switches, Authorized Persons Types of Power Block, Precautions & Procedures, Power Block Registers Operation of Rotary Switch Locomotives - Kind, Features and Specifications
TI/TP-1/5.4	Mechanical : Rolling Stock – Features & Specifications how it rolls on Track – Track Bound, LHB and Hybrid coach, Locomotives - Kind, Features and Specifications Examinations - kinds, Things to be observed and Specifications, ROH, IOH, POH of Rolling Stock Brake System – Working of Air Brake System – Hand Brake in Wagons, GDR. Check, Resetting of alarm chain apparatus, Abnormal occasions – Flat Tyre, Brake Binding, Hot Axle, open door etc Brake Power Certificates – Various kinds of Coaching & Freight BPCs, Guard and Loco Pilot Check-Clearance from IMS station Trouble Shooting of LHB coach, Crew Management- CMS,

TI/TP-1/6	SAFETY MANAGEMENT
TI/TP-1/6.1	Accidents – Definitions, Threshold Value, Classification, Reporting, Assistance Protocol. Accident case studies, Safety in train operation • Consequential & other Train accidents • Indicative Accidents – Class F, G & H • Accident Management- Sounding of Hooter, Movement of Relief trains • Chain of command during accident, Running of ART/SPART, ARME/SPARME, Break down Special, Target Time, • Protection of line, Preservation of clues at the site • Various Accident Forms, • Duties of SM, Guard, LP, Controller and Supervisors of various department in case of Serious Accidents • Person falling out / knocked down by Trains – Duties of Guards & SM • Slack, Rough running reported by LPs / Guards • Fire on Trains, Hot Axle, Train Parting / Dividing • Prima-facie cause of accident, Reading and measurement at accident site by Supervisors and preparation of Joint Note • Ex-gratia payments • Causes of accidents and remedial measures • Accident enquiries, Levels of Enquiry
TI/TP-1/6.2	Disaster Management – Introduction, Various Organizations, Developments on DM at National level, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance. Working of trains during disasters (Floods, Cyclones, Earthquakes etc)
TI/TP-1/6.3	Guest lecture - by Divisional Officers / Supervisory Officials and Safety

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	Counsellors on "Accident Management"
TI/TP-1/6.4	First Aid – (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs. Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half day for Hands on Practice.
TI/TP-1/6.5	Fire Fighting – Theory & Demonstration, Civil defence. Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire. Half day for Hands on Practice.

TI/TP-1/7	ESTABLISHMENT & STORES
TI/TP-1/7.1	Leave - their kinds and rules, Leave encashment Rule.
TI/TP-1/7.2	Passes - their kinds, Rules and eligibility.
TI/TP-1/7.3	Pay & Allowances - Entitlements, Rules regarding TA, DA, Night Duty Allowance, Overtime and their curtailment, Contingency charges and Composite Transfer Grant.
TI/TP-1/7.4	Main provisions of Railway Service Conduct Rules
TI/TP-1/7.5	Duty Roster - Description and classification, statutory provisions, periodical rest, long-on, short-off, split shift, penalty for violation of HWPR, Job analysis procedure.
TI/TP-1/7.6	D& AR – Brief Introduction-Standard Forms, Provision under Discipline and Appeal Rule 1968, Definition of various authorities, suspension, Defence Counsellor, Principle of natural justice, speaking orders, procedure for imposition of minor and major penalty, appeal, revision and review, special attention on provision under section 14(4), NIP, facilities during suspension period. How to Conduct an Enquiry.
TI/TP-1/7.7	NPS, relevant factors and calculation, benefits, disposal of dues by Society Bank in case of employee's death
TI/TP-1/7.8	Workmen Compensation Act 1923, Payment and Wages Act 1936, Industrial Dispute Act 1947, PNM, JCM, PREM, RTI, SBF, Disability act 2012 and 1995, Confidential Report (APAR).
TI/TP-1/7.9	Medical Entitlements.
TI/TP-1/7.10	Seniority after the Induction Course at ZRTI. Career Prospects
TI/TP-1/7.11	Stores Department - Functions - Indenting, Accountal, Issue/Disposal of Consumable & Non consumable stores, T&P items, Dead stock register, Various Books & Forms Stock sheet.

TI/TP-1/8	INFORMATION TECHNOLOGY
TI/TP-1/8.1	Computerization in Indian Railways
TI/TP-1/8.2	Basic Knowledge of Computers(Word, Excel, Power Point), Means of Social Media and their uses
TI/TP-1/8.3	FOIS, RMS, TMS, COIS, ICMS, PAM, CMS, NTES, WILD, SIMRAN, SATSANG etc- an overview
TI/TP-1/8.4	COA – Introduction on Software, Hardware and Train charting, Computerized TSR,
TI/TP-1/8.5	E-procurement, IPAS, GEM, etc.
TI/TP-1/8.6	Hand on Practice.

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TI/TP-1/9	ETHICAL LEADERSHIP & SOFT SKILL
TI/TP-1/9.1	Ethics – Meaning, Role, Need, Value and Importance in public life.
TI/TP-1/9.2	Leadership – Meaning, Role, Need, Value and Importance, Team building, Crowded/Mob Management.
TI/TP-1/9.3	Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience, Brain Storming, Perception. Forgiveness, Case studies/ inspirational videos.
TI/TP-1/9.4	Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life.
TI/TP-1/9.5	Customer care - Public perception, public relations, courtesy, Customer service its importance and provision.
TI/TP-1/9.6	Soft Skills – Meaning, Requirements and its importance in public life.
TI/TP-1/9.7	Yoga, PT, Meditation and Shramdan.
TI/TP-1/9.8	Sports

TI/TP-1/10	FIELD TRAINING
TI/TP-1/10.1	Study Tour during the Training Course at ZRTI (4days) - Visit to a Small, Medium & Large Stations in the Zone

TI/TP-1/11	CONTROL TRAINING
TI/TP-1/11.1	Control Training In the Division's Control Office for 3 Days.

TI/TP-1/12	EXAMINATION	Day	Hours
TI/TP-1/12.1	Paper – 1 (G&SR, Operating Manual and Accident Manual) Max Marks: 100 [Obj: 40 Marks; Descriptive: 60 Marks]	1	3
TI/TP-1/12.2	Paper – 2 (Block Working Manual and Others) Max Marks: 100 [Obj: 40 Marks; Descriptive: 60 Marks]	2	3
TI/TP-1/12.3	Paper – 3 (Commercial and Accounts) Max Marks: 100 [Obj: 40 Marks; Descriptive: 60 Marks]	3	3
TI/TP-1/12.4	Practical Test : (Operation of various Block Instruments, Model Room, Filling up of Operating Forms, Working in Panel & RRI/EI, Hand Cranking of Points, Clamping & Padlocking). Max Marks: 100	4	--

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## Training Module for Goods Guards Initial/Promotion

|                   |                                                                            |
|-------------------|----------------------------------------------------------------------------|
| <b>Department</b> | <b>Transportation</b>                                                      |
| Course No.        | <b>TI/TP-2</b>                                                             |
| Category          | <b>Goods Guard Initial/ Promotion</b>                                      |
| Stage             | <b>Induction through RRB or Promotion through Departmental Examination</b> |
| Duration          | <b>50 working days / 300 Hours</b>                                         |

| <b>Module No.</b> | <b>Description</b>                          | <b>Hours</b> | <b>Days</b> |
|-------------------|---------------------------------------------|--------------|-------------|
| TI/TP-2/1         | Foundation Course                           | 12           | 02          |
| TI/TP-2/2         | Transportation -1 (Lower Transportation)    | 84           | 14          |
| TI/TP-2/3         | Transportation – 2 (Commercial)             | 36           | 06          |
| TI/TP-2/4         | Transportation – 4 (Other Departments)      | 24           | 04          |
| TI/TP-2/5         | Safety Management                           | 24           |             |
| TI/TP-2/6         | Establishment                               | 18           | 03          |
| TI/TP-2/7         | Information Technology                      | 30           | 05          |
| TI/TP-2/8         | Ethical leadership & Soft Skills            | 24           | 04          |
| TI/TP-2/9         | Control and Lobby Training (2 Day x 6 Hrs.) | 12           | 02          |
| TI/TP-2/10        | Field Training (3 Days x 6 Hrs.)            | 18           | 03          |
| TI/TP-2/11        | Examination                                 | 18           | 03          |
|                   | <b>TOTAL</b>                                | <b>300</b>   | <b>50</b>   |



| TI/TP-2/1   | FOUNDATION COURSE                                                                                                       |
|-------------|-------------------------------------------------------------------------------------------------------------------------|
| TI/TP 2/1.1 | Admission Formalities                                                                                                   |
| TI/TP 2/1.2 | History and Development of Indian Railways, its prime objectives-Vision                                                 |
| TI/TP 2/1.3 | Organisational Set up of Indian Railways – Railway Board, Zonal Railway, Divisional Level & Station/Depot Level         |
| TI/TP 2/1.4 | Various Departments of Indian Railways – Their functions – an Introduction                                              |
| TI/TP 2/1.5 | Organisational Set up of Traffic Department – Role of Operating, Commercial Department                                  |
| TI/TP 2/1.6 | Control Department – Structure, Role, Importance and Functions in Operations.                                           |
| TI/TP 2/1.7 | Safety Department – Role, Importance and Functions in Railway Operations, CRS - Organisation, Importance and Functions. |
| TI/TP 2/1.8 | Official Language Implementation – Importance – Various Incentives for qualifying in Hindi proficiency                  |

| TI/TP-2/2    | TRANSPORTATION - 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TI/TP-2/2.1  | <b>Safety Rules</b> – GR, SR, Special Instruction, Approved Special Instruction, Station Working Rules & Miscellaneous Circulars Introduction of G&SR, BWM, AM, OM, WTT, SWR                                                                                                                                                                                                                                                                                                                                                                                      |
| TI/TP-2/2.2  | Rules applying to Railway Servants, ABCD Classification of Staff,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| TI/TP-2/2.3  | Definitions,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| TI/TP-2/2.4  | <b>System of Working</b> – Definition, Different Systems – Introduction Salient features of Absolute Block System – Means of Communication-Authority to Proceed                                                                                                                                                                                                                                                                                                                                                                                                   |
| TI/TP-2/2.5  | Fixed Signals<br>All Hand Signals & their Occasions<br>Fog/Detonating Signal, Warning Signal – Responsibilities of train crew                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| TI/TP-2/2.6  | Isolation & Interlocking                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| TI/TP-2/2.7  | <b>Indicators</b> – Point, Trap, Route & SPI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| TI/TP-2/2.8  | <b>Boards</b> – Warning Boards (Passenger, Goods, Shunting & Station), Shunting Limit Board, Block Section Limit Board, STOP Board, Caution & Termination Boards, etc                                                                                                                                                                                                                                                                                                                                                                                             |
| TI/TP-2/2.9  | Classification of Stations, Minimum Equipment of Signals in Multiple Aspect Area, Station Section                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| TI/TP-2/2.10 | Conditions for taking ‘off’ Signals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| TI/TP-2/2.11 | <b>Signal Failure</b> <ul style="list-style-type: none"> <li>• Failure of all Signals, Passing IBSS/GSS at ‘ON’</li> <li>• Reception on Obstructed / Non-Running / Non-Signalled Line</li> <li>• Despatch from a Non- Running / Non-Signalled Line, a line out of group of lines with Common Starter</li> <li>• <b>Introduction, Kavach and its Sub Systems :Salient features of Kavach , Components of Kavach, Kavach arrangements in station at a glance, Loco Kavach at a glance, Radio Frequency Identification (RFID) Tags, Working Principle</b></li> </ul> |

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| TI/TP-2/2.12 | <p><b>Working of Trains generally</b></p> <ul style="list-style-type: none"> <li>• Systems of working,</li> <li>• Protection rules.</li> <li>• Points, defective points.</li> <li>• Precautions on receiving various authorities</li> <li>• Precautions during S&amp;T failures and non interlock working /overhauling/ cable maggering</li> <li>• Brakevan safety fittings, SLR equipment, Guard personal store, Working of EMU / DMU,</li> <li>• Goods load table and passenger load table.</li> <li>• Std. Time, Advertised Time, Setting Watch, Time of attendance, On &amp;Off Registers.</li> <li>• WTT, Load Table, Speeds – MPS, Booked Speed, Speed over Facing Points, Speedometer.</li> <li>• Caution Order – Kinds, Description &amp; Circumstances-Speed.</li> <li>• Engine Pushing.</li> <li>• Head light, Marker light, Flasher light, Side lights, LV Board / Tail lamp.</li> <li>• Equipments of Brake Van &amp; Guard.</li> <li>• Manning of Engine in motion, Persons in Engine, Driving Electric Train.</li> <li>• Goods Home for Passenger Train, Direction of running.</li> <li>• Guard, BV, Goods Train without Guard / BV</li> <li>• Marshalling Order. ODC</li> <li>• Examination of Train by Engine Crew, Coupling &amp; uncoupling.</li> <li>• Starting of Trains.</li> <li>• Duties of Guard before starting, on run and on arrival</li> <li>• Exchanging of all right signals, detaching engine both in block section and station section</li> <li>• Responsibility of Guard about caution order</li> <li>• Responsibility of Guard regarding punctuality, Role of Guard for Punctual running of passenger carrying train, Time tabling, Rake Link</li> <li>• Train held up at First Stop Signal</li> <li>• Attracting attention of LP, Application of Hand Brakes.</li> <li>• Whistle &amp; Bell Codes.</li> <li>• Berthing of Trains, Manning of Engine.</li> <li>• Material Train.</li> <li>• Long Haul Trains –Need-Advantages-Special precautions</li> <li>• Working of goods trains - CC+6+2, CC+8+2.</li> <li>• <b>Operational Modes of Onboard Kavach for Version 4.0: Driver Machine Interface (DMI) at a glance, Different Types of Operational Modes of Onboard Kavach for Version 4.0, Mode Transitions in Kavach Ver 4.0, Features available at different Operational Modes in Kavach.</b></li> </ul> |
| TI/TP-2/2.13 | <p><b>Control &amp; Working of Stations</b></p> <ul style="list-style-type: none"> <li>• Station Working Rules – Contents-validity-Rule diagram-Special precautions-Appendices</li> <li>• Forms – Responsibility of Guard</li> <li>• Shunting – Definition, Types, Control &amp; Supervision of Shunting, Shunting on Gradients, Shunting Authorities</li> <li>• Securing of Vehicles – Stabling at Station, stabling train / loco, clearance of stable load, GDR check, Ghat rules – Slip siding and catch siding, Stalled in Mid section</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TI/TP-2/2.14 | <b>Abnormal working situations -</b> <ul style="list-style-type: none"> <li>• Paper Line Clear ticket, Authority To Proceed without Line Clear,</li> <li>• Sending Relief Engine/Train into obstructed Block Section,</li> <li>• TFC on Single Line &amp; Double Lines,</li> <li>• Single line working on Double Lines,</li> <li>• Track defect, Thick and foggy weather.</li> <li>• Duties of Guard -,</li> <li>• Cattle run over cases,</li> <li>• Obstruction in block section,</li> <li>• Train delayed in block section,</li> <li>• Loco pilot reporting any abnormal condition in block section.,</li> <li>• Train stall on gradient,</li> <li>• OHE failure,</li> <li>• ACP, Engine failure,</li> <li>• Application of brake /hand brake.</li> </ul>                                                                                                                                                                                                             |
| TI/TP-2/2.15 | <b>Automatic Block System (where required)</b> <ul style="list-style-type: none"> <li>• Overview of Automatic Block System</li> <li>• Kinds of Signals in Automatic Territory, Salient features of Automatic Block System – S/L &amp; D/L,</li> <li>• Various Authorities to Proceed – S/L &amp; D/L.</li> <li>• Sequence of change of Aspect of Signals –4 Aspect, Passing Auto/Semi Auto/Semi-Automatic Gate Stop Signals-</li> <li>• Working of Modified Semi-Automatic Stop Signal and how to pass at 'On' / Defective condition.</li> </ul> <b>Abnormal situations -</b> <ul style="list-style-type: none"> <li>• Sending Relief Engine/Train into Obstructed D/L Section,</li> <li>• Prolonged Failure of Signals in D/L, Both Signal &amp; Communication failed in D/L, T/A.912, Single Line working on Double line.</li> <li>• Protection.</li> <li>• Shunting.</li> <li>• Movement against Direction of Traffic.</li> <li>• Competency Certificate.</li> </ul> |
| TI/TP-2/2.16 | <b>Engineering Works:</b> <ul style="list-style-type: none"> <li>• Different types of Engineering works on Track</li> <li>• Line Block – Responsibilities of Guard</li> <li>• Works of Short duration &amp; Long duration-Protection at work site</li> <li>• Causeway</li> <li>• Patrolling of Track, Duties of Patrolmen</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| TI/TP-2/2.17 | Level Crossings – Types, Classification, Working instructions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| TI/TP-2/2.18 | Working of Trains in Electrified Section and brief idea of Emergency Train Lighting System.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| TRANSPORTATION - 2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| COACHING :         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| TI/TP-2/3.1        | <ul style="list-style-type: none"> <li>• Organization set up of Commercial Department, Functions of Different branches, Books of Reference</li> <li>• Different kinds of Tickets,</li> <li>• Break Journey Rules</li> <li>• Booking of Luggage, Booking of Animals &amp; Birds – IRCA Coaching Tariff</li> <li>• General idea about Customer care and vigilance, NTES, IVRS, TSBE, securities of ladies and handicapped pass.</li> <li>• Booking of Parcels - IRCA Coaching Tariff, Preparation &amp; Disposal of PWB, Leasing of SLR, AGC, VP, Rebooking of Parcels</li> <li>• Responsibility of Railways as carrier of Luggage, Parcels, etc – Common Carrier liability</li> <li>• Passenger Amenities,</li> <li>• Public Complaints, Claims - causes &amp; prevention</li> <li>• Railways Act, 1989 – Important Sections</li> <li>• General rules for booking of Parcel and Luggage, articles not accepted in parcel and luggage. Parcel rate list, booking of bulky articles, booking of motor cycle, free allowance, marginal allowance, percentage charge on additional price, booking of dog, booking of animals in brake van, Carriage of parcel, luggage, animals in brake van.</li> <li>• Working of Cash Safe</li> <li>• Packing, Labelling and Marking</li> <li>• Permission to Travel Certificate, Guard Certificate</li> <li>• Duties of Guard in case of theft in running train and seal missing/damage.</li> </ul> |
| GOODS :            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| TI/TP-2/3.2        | <ul style="list-style-type: none"> <li>• Sidings – Types, Working Instructions, Siding timings</li> <li>• EOL - Rules regarding Placement,</li> <li>• Packing &amp; Weighment of Goods-Electronic In motion Weighbridge</li> <li>• Booking &amp; Carriage of Military Traffic, Dangerous Goods</li> <li>• Loading of Wagons, Sealing, Riveting &amp; Locking</li> <li>• Unloading of Wagons, Reporting of Discrepancies, Role of NR Cell</li> <li>• Diversion and rebooking,</li> <li>• Demurrage &amp; Wharfage</li> <li>• Military Warrant</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| TI/TP-2/4   | TRANSPORTATION - 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| C & W :     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| TI/TP-2/4.1 | <ul style="list-style-type: none"> <li>• Rolling Stock – Features, types, Its Nomenclature and Specifications</li> <li>• LHB, Hybrid and conventional coach,</li> <li>• ROH, IOH, POH of Rolling Stock</li> <li>• Brake System:</li> <li>• Air Brake System – working method with Diagrams, Parts &amp; Functions, Working of Single and Twin pipe air brake system</li> <li>• Pneumatic Brake-Working principle</li> <li>• Hand Brake in Rolling Stock</li> <li>• Brake Power Certificate – Kinds, Validity for Coaching &amp; Freight Trains</li> <li>• Abnormal situations:</li> <li>• Percentage of brake power required in goods/mixed/passenger trains, Alarm Chain Pulling – resetting and isolating,</li> <li>• Continuity test, Cases of brake binding and releasing, detection and action to be taken,</li> <li>• Flat tyre, Hot axle and Air spring failure - symptoms and action to be taken, open door etc.</li> <li>• Guard and Loco Pilot Check - Clearance from intermediate station</li> <li>• Brake Continuity Test and its importance, Isolation of Distributor Valve.</li> <li>• Trouble Shooting:</li> <li>• Manning of Hose Pipe, coupling and its application and LHB Coaches.</li> <li>• Guard and Driver Report</li> </ul>               |
| TI/TP-2/5   | SAFETY MANAGEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| TI/TP-2/5.1 | <p><b>Accidents</b> – Definitions, Threshold Value, Classification, Reporting, Assistance Protocol.</p> <ul style="list-style-type: none"> <li>• Accident case studies, Safety in train operation</li> <li>• Consequential &amp; other Train accidents</li> <li>• Indicative Accidents – Class F, G &amp; H</li> <li>• Accident Management- Sounding of Hooter, Movement of Relief trains</li> <li>• Chain of command during accident, Running of ART/SPART, ARME/SPARME, Break down Special, Target Time,</li> <li>• Protection of line, Preservation of clues at the site</li> <li>• Various Accident Forms,</li> <li>• Duties of SM, Guard, LP, Controller and Supervisors of various department in case of Serious Accidents</li> <li>• Person falling out / knocked down by Trains – Duties of Guards &amp; SM</li> <li>• Slack, Rough running reported by LPs / Guards</li> <li>• Fire on Trains, Hot Axle, Train Parting / Dividing</li> <li>• Prima-facie cause of accident, Reading and measurement at accident site by Supervisors and preparation of Joint Note</li> <li>• Ex-gratia payments</li> <li>• Causes of accidents and remedial measures</li> <li>• Accident enquiries, Levels of Enquiry</li> <li>• <b>FAQ related to Kavach</b></li> </ul> |

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| TI/TP-2/5.2 | <b>Disaster Management</b> – Introduction, Various Organizations, Developments on DM at National level, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance.<br>Working of trains during disasters (Floods, Cyclones, Earthquakes etc)                                           |
| TI/TP-2/5.3 | <b>Guest lecture</b> - by Divisional Officers / Supervisory Officials and Safety Counsellors on "Accident Management"                                                                                                                                                                                                                                            |
| TI/TP-2/5.4 | <b>First Aid</b> – (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs.<br>Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half Day Hands on Practice. |
| TI/TP-2/5.5 | <b>Fire Fighting</b> – Theory & Demonstration, Civil defence.<br>Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire.<br>Half Day Hands on Practice.                                                                                                            |

| TI/TP-2/6    | ESTABLISHMENT                                                                                                 |
|--------------|---------------------------------------------------------------------------------------------------------------|
| TI/TP-2/6.1  | Leave - their kinds and rules, Leave encashment Rule.                                                         |
| TI/TP-2/6.2  | Passes - their kinds, Rules and eligibility.                                                                  |
| TI/TP-2/6.3  | Pay & Allowances - Entitlements, Rules regarding various allowances.                                          |
| TI/TP-2/6.4  | Main provisions of Railway Service Conduct Rules                                                              |
| TI/TP-2/6.5  | HWPR, Duty hours of running staff.                                                                            |
| TI/TP-2/6.6  | D& AR – Brief Introduction-Standard Forms, Provision and procedure under Discipline and Appeal Rule 1968.     |
| TI/TP-2/6.7  | NPS, relevant factors and calculation, benefits, disposal of dues by Society Bank in case of employee's death |
| TI/TP-2/6.8  | PNM, JCM, PREM, RTI, SBF, Confidential Report (APAR).                                                         |
| TI/TP-2/6.9  | Medical Entitlements.                                                                                         |
| TI/TP-2/6.10 | Seniority after the Induction Course at ZRTI. Career Prospects                                                |

| TI/TP-2/7   | INFORMATION TECHNOLOGY                                                                                     |
|-------------|------------------------------------------------------------------------------------------------------------|
| TI/TP-2/7.1 | Computerization in Indian Railways                                                                         |
| TI/TP-2/7.2 | Basic Knowledge of Computers (Word, Excel, Power Point presentation), Means of Social Media and their uses |
| TI/TP-2/7.3 | FOIS, RMS,TMS, COA, COIS, ICMS, PAM, NTES, WILD, SIMRAN, SATSANG etc-an overview                           |
| TI/TP-2/7.4 | CMS training                                                                                               |
| TI/TP-2/7.5 | Hands on Practice.                                                                                         |

| TI/TP-2/8   | ETHICAL LEADERSHIP & SOFT SKILL                                                                                                                                                                               |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TI/TP-2/8.1 | Ethics – Meaning, Role, Need, Value and Importance in public life.                                                                                                                                            |
| TI/TP-2/8.2 | Leadership – Meaning, Role, Need, Value and Importance, Team building, Crowded/Mob Management.                                                                                                                |
| TI/TP-2/8.3 | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience, Brain Storming, Perception. Forgiveness, Case studies/ inspirational videos. |
| TI/TP-2/8.4 | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life.                                                                                                         |
| TI/TP-2/8.5 | Customer care - Public perception, public relations, courtesy, Customer                                                                                                                                       |

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|             |                                                                        |
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|             | service its importance and provision.                                  |
| TI/TP-2/8.6 | Soft Skills – Meaning, Requirements and its importance in public life. |
| TI/TP-2/8.7 | Yoga, PT, Meditation and Shramdan.                                     |
| TI/TP-2/8.8 | Sports                                                                 |

| TI/TP-2/9   | FIELD TRAINING                                                                                    |
|-------------|---------------------------------------------------------------------------------------------------|
| TI/TP-2/9.1 | During the Training Course at ZRTI (3 days) - Work on Goods & Passenger Train with on duty Guard. |

| TI/TP-2/10   | CONTROL AND LOBBY TRAINING                            |
|--------------|-------------------------------------------------------|
| TI/TP-2/10.1 | Control and Lobby working In the Division for 2 Days. |

| TI/TP-2/11   | EXAMINATION                                                                                                                          | Day | Hours          |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------|-----|----------------|
| TI/TP-2/11.1 | <b>Paper – 1</b><br><b>(Transportation and Safety Management)</b><br><b>Max Marks: 100</b><br>[Obj: 40 Marks; Descriptive: 60 Marks] | 1   | 3              |
| TI/TP-2/11.2 | <b>Paper – 2</b><br><b>(Commercial)</b><br><b>Max Marks: 50</b><br>[Obj: 20 Marks; Descriptive: 30 Marks]                            | 2   | 1 Hr. 30 Mnts. |
| TI/TP-2/11.3 | <b>Paper – 3</b><br><b>(C&amp;W and Others)</b><br><b>Max Marks: 50</b><br>[Obj: 20 Marks; Descriptive: 30 Marks]                    |     | 1 Hr. 30 Mnts. |
| TI/TP-2/11.4 | <b>Viva-voce Exam</b><br><b>Max. Marks 100 = (Traffic 50 + C&amp;W 30 + ETL 20)</b>                                                  | 3   | --             |

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Training Module for Section Controller Initial & Promotion

| | |
|-------------------|---|
| Department | Transportation |
| Course No. | TI/TP-3 |
| Category | Section Controller Initial / Promotion |
| Stage | Induction through RRB or Promotion through Departmental Exam |
| Duration | 54 working days / 324 Hours |

| S. No. | Subject | Hours | Days |
|---------------|--|--------------|-------------|
| TI/TP-3/1 | Foundation Course | 12 | 02 |
| TI/TP-3/2 | Transportation -1 (Lower Transportation) | 60 | 10 |
| TI/TP-3/3 | Transportation – 2 (Commercial) | 36 | 06 |
| TI/TP-3/4 | Transportation – 3 (Higher Transportation) | 48 | 08 |
| TI/TP-3/5 | Transportation – 4 (Other Departments) | 30 | 05 |
| TI/TP-3/6 | Practical Training | 18 | 03 |
| TI/TP-3/7 | Safety Management | 18 | 03 |
| TI/TP-3/8 | Information Technology | 30 | 05 |
| TI/TP-3/9 | Ethical leadership & Soft Skills | 18 | 03 |
| TI/TP-3/10 | Control Training (6 Days x 6 Hrs.) | 36 | 06 |
| TI/TP-3/11 | Examination | 18 | 03 |
| | TOTAL | 324 | 54 |

| TI/TP-3/1 | FOUNDATION COURSE |
|-------------|--|
| TI/TP-3/1.1 | Admission Formalities |
| TI/TP-3/1.2 | History and Development of Indian Railways, its prime objectives-Vision |
| TI/TP-3/1.3 | Organisational Set up of Indian Railways – Railway Board, Zonal Railway, Divisional Level & Station/Depot Level |
| TI/TP-3/1.4 | Various Departments of Indian Railways – Their functions – an Introduction |
| TI/TP-3/1.5 | Organisational Set up of Traffic Department – Role of Operating, Commercial Department |
| TI/TP-3/1.6 | Control Department – Structure, Role, Importance and Functions in Operations. |
| TI/TP-3/1.7 | Safety Department – Role, Importance and Functions in Railway Operations, CRS: Organisation, Importance and Functions. |
| TI/TP-3/1.8 | Official Language Implementation – Importance – Various Incentives for qualifying in Hindi proficiency |

| TI/TP-3/2 | TRANSPORTATION - 1 |
|-------------|---|
| TI/TP-3/2.1 | Safety Rules- G&SR, Special Instructions (BWM, AM, OM, WTT), Approved special Instructions, SWR and Miscellaneous Instructions- Introduction |
| TI/TP-3/2.2 | Rules applying to Railway servants generally |
| TI/TP-3/2.3 | Definitions |
| TI/TP-3/2.4 | Basic knowledge on P.Way, Rolling Stock, Electrical(Traction distribution) and S & T, CRIS and its various applications in Indian Railways, |
| TI/TP-3/2.5 | Signals -
Fixed Signals in Multiple Aspect Colour light signals - Distant, Inner Distant, Combination of Distant Signal with Last Stop signal and Gate stop signal, Home, Routing Home, Starter, Inter-Starter, Advanced Starter, Calling-On Signal, Shunt Signal- Types, Gate Stop Signal with 'G' and without 'G' marker, Intermediate Block Stop Signal on Single line, Double line and multiple line, Indicators - Route indicators, Shunting Permitted Indicator, Boards- Warning Boards (Passenger, Goods, Shunting & Station), Shunting/Block Section Limit Board, Caution & Termination Indication Boards, etc. Hand Signals and their description, knowledge and their exhibition, Fog / Detonating Signals, VTO, Fog signal post, Fog Signalling , station detonator register, Working of trains in thick and foggy weather, Warning Signal . |
| TI/TP-3/2.6 | Station layouts, CSL, Marshalling yards, Components of Goods and Coaching yards, Terminal yards |
| TI/TP-3/2.7 | Points and its components -
Points and crossovers, turnouts, types of points, setting and securing of Points, Point indicator and trap indicator, Isolation - Definition, Objective, Approved means of isolation, Interlocking - Definition, Essentials of Interlocking, Kinds and Standards of interlocking, Various interlocking devices - Mechanical, Electro mechanical, Electronic and digital interlocking devices - Lever, Lever cabin, Panel, RRI, VDU, BPAC, HASSDAC |
| TI/TP-3/2.8 | System of working - Essentials of Absolute Block system, Classification of Stations, minimum equipment of signals in multiple aspect area, Station section, Block Section - condition for granting line clear, Conditions for taking OFF Home signal, Routing signal, Starter, Inter Starter, Advanced Starter, Intermediate block Stop Signal, Gate Stop Signal, Other system of working applicable on concern railway. |

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|--------------|---|
| TI/TP-3/2.9 | Various Authorities to Proceed - Single line and Double line, Block instrument Failure, Follow up action, Procedure for preparation and issue of authorities |
| TI/TP-3/2.10 | Reception and despatch of trains during signal failure -
Duties of SM when signal is defective - Inspection of defective gear, reporting and recording of failures, restoration of failures - S&T/NM, S&T(T/351) (G&SR 3.68) |
| TI/TP-3/2.11 | Procedure for dealing trains during failure of all reception and despatch stop signals, Intermediate Block Stop Signal, Shunt signal, Shunting Permitted Indicator, Gate Stop Signal
Other occasions- Reception and Despatch:
Reception on obstructed/non-running/non-signalled Road, Despatch from a Non- Running/ Non- Signalled Road, line governed by common Starter
Responsibilities of Controller during Block Failure and abnormal conditions. |
| TI/TP-3/2.12 | Control & Working of Stations -
Standard Time, Advertised Time, Station Working Rules – Various safety aspects and special features. |
| TI/TP-3/2.13 | Shunting - Definition, Types, Control, Supervision, Shunting on Gradients and Authorities, Securing of Vehicles - Stabling of train at Station /Yard /Siding - Role of station and running staff, Ghat section rules- Slip siding and Catch siding |
| TI/TP-3/2.14 | Caution Order - Types, Circumstances, computer printed caution order, exchange of caution messages through E-Mail, Receiving/Cancelling Caution Order Message, Making Entries in Caution Order Register
Engine Pushing, Goods Train without Guard/ BV. |
| TI/TP-3/2.15 | Abnormal Working -
Procedure for Sending relief engine, Total Interruption of Communication, Temporary Single line working on Double line, Train parting, Train dividing, Run away trains , Vehicles escaping |
| TI/TP-3/2.16 | Level Crossing -Types, Classification, Working and Failure |
| TI/TP-3/2.17 | Automatic Block System -
Essentials and Salient features of Automatic Block System – Single line and Double line
Kinds of Signals in Automatic Territory
Various Authorities to Proceed - Single line and Double line
Passing Automatic / Semi- Automatic / Semi- Automatic Gate Stop Signal / Modified Semi- Automatic Stop Signal at 'ON', Movement against direction of traffic, Shunting
Sending Relief Engine/ Train into an Obstructed section
Abnormal working in Automatic Block System. |

| TI/TP-3/3 | TRANSPORTATION - 2 |
|-------------|---|
| TI/TP-3/3.1 | <ul style="list-style-type: none"> Brief introduction and role of commercial department Classification of station & minimum amenities provided at stations Booking of coach & Special Train (FTR) General features of rates and freight structure, Theory of rates, Routing, Opening and closing of halt station, Wagon demand, Registration, e-Registration, e-Demand, e-Payment allotment & supply of wagon, Change of destination, change of commodity Common carrier liability under section 93 to 104, Provision of 123 to 129 of Rly. Act Various users consultative committees, public relations Procedure for re-booking and diversion, Short of destination Freight incentive schemes & Transportation products Down fall of traffic, Suggestions to capture the traffic, Measures to improve railway earnings |
| TI/TP-3/3.2 | <ul style="list-style-type: none"> Rail-Road co-ordination and competition, Booking and acceptance of Goods traffic, Demurrage and wharfage rules, stacking permission and rules, Waiver of Demurrage and wharfage Types of sidings & opening of sidings, Traffic survey of new lines Weighment, Re-weighment, Punitive charges Private Freight Terminal, EOL Un connected , Un delivered, Over carrying consignment & working of NR cell Claims, Causes & preventions, Commercial Statistics IT, FOIS, TMS, PMS, NTES |

| TI/TP-3/4 | TRANSPORTATION - 3 |
|-------------|---|
| TI/TP-3/4.1 | Control Organisation : <ul style="list-style-type: none"> Organisational Setup, functions of various controls – trains, traffic, punctuality, power, traction loco, crew, traction power, engineering, S&T, security, C&W, General Electrical Master Chart – preparation, advance plotting and planning Duties of Trains Controller, traffic controller, Punctuality Controller, Chief Controller, Various Registers maintained at Control office Trains Branch- Preparation of various reports on hourly, daily and periodically, Preparation of statistics, USF, Data collection/ monitoring on FOIS and ICMS Working of Central and Emergency Control at HQ |
| TI/TP-3/4.2 | Goods train operations – <ul style="list-style-type: none"> Nomenclature of various goods stock, Maintenance schedule of Rolling stock, Brake Power Certificate Kinds of goods trains, load, ordering of goods train, average speed of goods train, Pre-departure and Post arrival detention, putting back of ordered goods trains, Express goods train and Goods time table Interchange of Goods trains – Forecast and commitments for the day, factors affecting interchange Block rake marshalling –, movement, special goods stock, CONCORD, CONTRACK, Steel rakes and NMG, Restricted and prohibited trains, TPMS, e-Act, ODC/ISMD Marshalling yard and its components |

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| | |
|-------------|---|
| | <ul style="list-style-type: none"> Wagon pool, wagon census, stock report Allotment of wagons, Quotas and restrictions, Preferential traffic schedule Line Capacity – calculation, factor affecting line capacity, measures to improve line capacity, Load Table, Requirement of Banking and Assisting Engine, Throughput - factor affecting, measures to improve throughput, ESP, SIP, DPR, Goods Terminal, various Sidings – working, measures to reduce detention |
| TI/TP-3/4.3 | <p>Passenger train operation –</p> <p>Nomenclature of various coaching stock, Special features of New coaching stock</p> <p>Types of passenger carrying trains – Mail/Express, Super Fast, Passenger viz conventional, EMU, DEMU, MEMU, Train-18, Tejas, Train-20 etc.</p> <p>Time tabling of Passenger trains – types, procedure for preparation, issue and revision, SATSANG, Platform occupation Chart, pit-line occupation chart</p> <p>Running time- Calculation, Speed trial, MPS, Booked Speed, Speed over Facing Points, turnouts, Various time allowances.</p> <p>Punctuality – calculation, factors affecting punctuality and measures to improve punctuality, PAM, GPS, Data logger, e-TSR, LTM-Cause wise analysis</p> <p>Rake link- Preparation and issue of Rake link booklet</p> <p>Movement of special / VIP trains, precautions for military and 'mela' special</p> |
| TI/TP-3/4.4 | <p>Loco Utilisation -</p> <p>Locos – types, hauling capacity, detention, balancing, power plan, outage, measures to improve loco utilisation, engine link, Maintenance – Scheduling of various locos, POH, ROH, nomination of locos for various services and sections, economy in fuel consumption, Managing loco failures, Dead loco movement</p> |
| TI/TP-3/4.5 | <p>Crew Management - crew link, booking of crew, lobby working, 10 hour rule, HQ and outstation rest, Running room and other facilities for crew.</p> |
| TI/TP-3/4.6 | <p>Operating Statistics</p> <p>Wagon holding- Average wagon balance, Wagon KM per Wagon Day, NTKM per Engine Hour, NTKM per Wagon Day, EKM per Engine Day on Line, In Use etc.</p> <p>Wagon turn round – calculation and measures to improve wagon turn round, Operating Ratio</p> |
| TI/TP-3/4.7 | <p>Train Papers -</p> <p>Combined Train Report, Rough Journal Book, Vehicle Guidance, Late Train Memo</p> |
| TI/TP-3/4.8 | <p>Inspections - Objectives, types, levels, periodicity, Techniques, follow up</p> |
| TI/TP-3/4.9 | <p>Non-Interlocked working - Temporary Working Instructions and Safety precautions, Preparation of chart, planning train operations, precautions to reduce train detentions</p> |

| TI/TP-3/5 TRANSPORTATION - 4 | |
|------------------------------|---|
| TI/TP-3/5.1 | <p>S&T:
 Specific duties under G&S.R
 Duties of S&T Staff – Co-ordination with other Departments, Maintenance Schedule, etc
 Forms & Memos:</p> <ul style="list-style-type: none"> • S&T (NM), S&T (T/351) • Failure Advice & Joint Restoration Memo • Route Release Memo, etc <p>Joint Inspection of Points & Crossings with JE/SE/P.Way – Schedule, Observations, Follow up, Signal Sighting Committee
 Panel/RRI/SSI- Resetting of Route/BPAC, Data Logger-Use in failure restoration & Maintenance</p> <ul style="list-style-type: none"> • Introduction, Kavach and its Sub Systems: Salient features of Kavach , Components of Kavach, Kavach arrangements in station at a glance, Loco Kavach at a glance, Radio Frequency Identification (RFID) Tags, Working Principle • Operational Modes of Onboard Kavach for Version 4.0: Driver Machine Interface (DMI) at a glance, Different Types of Operational Modes of Onboard Kavach for Version 4.0, Mode Transitions in Kavach Ver 4.0, Features available at different Operational Modes in Kavach. |
| TI/TP-3/5.2 | <p>Engineering :
 Specific duties under G&S.R
 Duties of P.Way Staff – Co-ordination with other Departments, Maintenance Schedule, etc
 Basics about Track, Track-Wheel Interface, Sleepers, Ballasts, etc Types of Track Defects – Slack/Rough running, Lurch, Buckling, etc
 Types of Track Machines, Types of Blocks & Working of Track Machines Types of Engineering Works-CTR,DSW,TRR,TSR
 Blocking of Running Lines, Precautions Integrated Block System & Block Corridor Action in case of weather warning messages</p> |
| TI/TP-3/5.3 | <p>Electrical:
 Specific duties under G&S.R
 Duties of OHE Staff – Co-ordination with other Departments, Maintenance Schedule, etc
 Basics about AC Traction, Elementary Knowledge of OHE
 Types of Power Block-Precautions & Procedures, Working of Tower Wagon Visit to Traction Power Controller Office, SCADA
 OHE Sectioning Diagram, FP, SSP, SP, Sector, Sub-Sector, Elementary and Neutral sections, Reporting of abnormalities and action to be taken.
 Operation of Isolator Switches, Authorized Persons
 Types of Power Block, Precautions & Procedures, Power Block Registers</p> |
| TI/TP-3/5.4 | <p>Mechanical :
 Rolling Stock – Features & Specifications Locomotives- Kind, Features and Specifications
 Examinations- kinds, Things to be observe and Specifications Brake System – Working of Air Brake System
 Abnormal occasions – Flat Tyre, Brake Binding, Hot Axle, open door etc
 Brake Power Certificates – Various kinds of Coaching & Freight BPCs</p> |

| TI/TP-3/6 PRACTICAL TRAINING | |
|-------------------------------------|---|
| TI/TP-3/6.1 | HOC/TOC, Login, Password, Observe current position, forecast and plan |
| TI/TP-3/6.2 | Charting of trains in the section – Train Ordering, Entering train timings, Plotting work-on-line, line block, power block, caution order, abnormal working, failures of all types, movement of motor trolleys, stabling of vehicles at stations, line position of stations |
| TI/TP-3/6.3 | COA hand held training through CRIS offline. |
| TI/TP-3/7 SAFETY MANAGEMENT | |
| TI/TP-3/7.1 | <p>Accidents – Definitions, Threshold Value, Classification, Reporting, Assistance Protocol.</p> <ul style="list-style-type: none"> • Accident case studies, Safety in train operation • Consequential & other Train accidents • Indicative Accidents – Class F, G & H • Accident Management- Sounding of Hooter, Movement of Relief trains • Chain of command during accident, Running of ART/SPART, ARME/SPARME, Break down Special, Target Time, • Protection of line, Preservation of clues at the site • Various Accident Forms, • Duties of SM, Guard, LP, Controller and Supervisors of various department in case of Serious Accidents • Person falling out / knocked down by Trains – Duties of Guards & SM • Slack, Rough running reported by LPs / Guards • Fire on Trains, Hot Axle, Train Parting / Dividing • Prima-facie cause of accident, Reading and measurement at accident site by Supervisors and preparation of Joint Note • Ex-gratia payments • Causes of accidents and remedial measures • Accident enquiries, Levels of Enquiry • Chronological Register (Log Book) • Kavach Related FAQ |
| TI/TP-3/7.2 | <p>Disaster Management – Introduction, Various Organizations, Developments on DM at National level, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance. Working of trains during disasters (Floods, Cyclones, Earthquakes etc)</p> |
| TI/TP-3/7.3 | <p>First Aid – (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs. Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half Day Hands on Practice.</p> |
| TI/TP-3/7.4 | <p>Fire Fighting – Theory & Demonstration, Civil defence. Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire. Half Day Hands on Practice.</p> |

| TI/TP-3/8 | INFORMATION TECHNOLOGY |
|-------------|--|
| TI/TP-3/8.1 | Computerization in Indian Railways |
| TI/TP-3/8.2 | Basic Knowledge of Computers (Word, Excel, Power Point), Means of Social Media and their uses. |
| TI/TP-3/8.3 | COA, FOIS, RMS,TMS, COIS, ICMS, PAM, CMS, NTES, WILD, SIMRAN, SATSANG etc- an overview and integration |
| TI/TP-3/8.4 | Hand on Practice. |

| TI/TP-3/9 | ETHICAL LEADERSHIP & SOFT SKILL |
|-------------|---|
| TI/TP-3/9.1 | Ethics – Meaning, Role, Need, Value and Importance in public life. |
| TI/TP-3/9.2 | Leadership – Meaning, Role, Need, Value and Importance, Team building, Crowded/Mob Management. |
| TI/TP-3/9.3 | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience, Brain Storming, Perception. Forgiveness, Case studies/ inspirational videos. |
| TI/TP-3/9.4 | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life. |
| TI/TP-3/9.5 | Customer care - Public perception, public relations, courtesy, Customer service its importance and provision. |
| TI/TP-3/9.6 | Soft Skills – Meaning, Requirements and its importance in public life. |
| TI/TP-3/9.7 | Yoga, PT, Meditation and Shramdan. |
| TI/TP-3/9.8 | Sports |

| TI/TP-3/10 | CONTROL TRAINING |
|--------------|---|
| TI/TP-3/10.1 | Control Training In the Division's Control Office for 6 Days. |

| TI/TP-3/11 | EXAMINATION | Day | Hours |
|--------------|---|-----|-------|
| TI/TP-2/11.1 | Paper – 1 (Transportation and Safety Management)
Max Marks: 100 [Obj: 40 Marks; Descriptive: 60 Marks] | 1 | 3 |
| TI/TP-2/11.2 | Paper – 2 (Commercial and Others)
Max Marks: 100 [Obj: 40 Marks; Descriptive: 60 Marks] | 2 | 3 |
| TI/TP-2/11.3 | Paper – 3 (Charting)
Max Marks: 100 | 3 | 3 |

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## Training Module for Trains Clerk Initial/Promotion

|            |                                                                     |
|------------|---------------------------------------------------------------------|
| Department | <b>Transportation</b>                                               |
| Course No. | <b>TI/TP-4</b>                                                      |
| Category   | <b>Trains Clerk Initial/Promotion</b>                               |
| Stage      | <b>Induction through RRB or Promotion through Departmental Exam</b> |
| Duration   | <b>36 Working Days / 216 Hours</b>                                  |

| S. No.     | Subject                                           | Hours      | Days      |
|------------|---------------------------------------------------|------------|-----------|
| TI/TP-4/1  | Foundation Course                                 | 12         | 02        |
| TI/TP-4/2  | Transportation -1 (Lower Transportation)          | 48         | 08        |
| TI/TP-4/3  | Transportation – 2 (Commercial)                   | 06         | 01        |
| TI/TP-4/4  | Transportation – 3 (Higher Transportation)        | 48         | 08        |
| TI/TP-4/5  | Transportation – 4 (Other Departments)            | 06         | 01        |
| TI/TP-4/6  | Safety Management                                 | 12         | 02        |
| TI/TP-4/7  | Information Technology and Its Practical Training | 36         | 06        |
| TI/TP-4/8  | Ethical Leadership & Soft Skills                  | 18         | 03        |
| TI/TP-4/9  | Field Training (4 Days X 6 Hrs.)                  | 24         | 04        |
| TI/TP-4/10 | Examination                                       | 06         | 01        |
|            | <b>TOTAL</b>                                      | <b>216</b> | <b>36</b> |



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| TI/TP-4/1    | FOUNDATION COURSE                                                                                                      |
|--------------|------------------------------------------------------------------------------------------------------------------------|
| TI/TP-4/1.1  | Admission Formalities                                                                                                  |
| TI/TP-4/1.2  | History and Development of Indian Railways, its prime objectives-Vision                                                |
| TI/TP-4/1.3  | Organisational Set up of Indian Railways – Railway Board, Zonal Railway, Divisional Level & Station/Depot Level        |
| TI/TP-4/1.4  | Various Departments of Indian Railways – Their functions – an Introduction                                             |
| TI/TP-4/1.5  | Organisational Set up of Traffic Department – Role of Operating, Commercial Department                                 |
| TI/TP-4/1.6  | Control Department – Structure, Role, Importance and Functions in Operations.                                          |
| TI/TP-4/1.7  | Safety Department – Role, Importance and Functions in Railway Operations, CRS: Organisation, Importance and Functions. |
| TI/TP-4/1.8  | Official Language Implementation – Importance – Various Incentives for qualifying in Hindi proficiency                 |
| TI/TP-4/1.9  | Customer Care and Sensitisation on Role of Trains Clerk in Indian Railways                                             |
| TI/TP-4/1.10 | Field visit to nearby Station - Familiarization with Station and Trains Clerks Duties-Physical Observation             |
| TI/TP-4/1.11 | Establishment - Railway service conduct rules and DAR, Pass and leave rules, HWPR                                      |

| TI/TP-4/2    | TRANSPORTATION - 1                                                                                                                                                                                                                                                                                                                                                                                |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TI/TP-4/2.1  | Introduction, General idea about G&SR, BWM, AM, operating manual, SWR etc.                                                                                                                                                                                                                                                                                                                        |
| TI/TP-4/2.2  | Important Definitions                                                                                                                                                                                                                                                                                                                                                                             |
| TI/TP-4/2.3  | Rules applying to Railway servants generally                                                                                                                                                                                                                                                                                                                                                      |
| TI/TP-4/2.4  | General idea about Signals                                                                                                                                                                                                                                                                                                                                                                        |
| TI/TP-4/2.5  | Basic knowledge of Systems of working                                                                                                                                                                                                                                                                                                                                                             |
| TI/TP-4/2.6  | Working time table. Load Table, PSR, Speeds - MPS, Booked Speed                                                                                                                                                                                                                                                                                                                                   |
| TI/TP-4/2.7  | Authorities related with TNC                                                                                                                                                                                                                                                                                                                                                                      |
| TI/TP-4/2.8  | Securing of vehicles, stabling train / loco, precautions while clearing stable load.                                                                                                                                                                                                                                                                                                              |
| TI/TP-4/2.9  | Marshalling Order, ODC / ISMD                                                                                                                                                                                                                                                                                                                                                                     |
| TI/TP-4/2.10 | Shunting - Definition, Types, Precautions during shunting.                                                                                                                                                                                                                                                                                                                                        |
| TI/TP-4/2.11 | Long haul train operation, Heavy Haul Train                                                                                                                                                                                                                                                                                                                                                       |
| TI/TP-4/2.12 | Hot Axle / Flat tyre / brake binding / open door / hanging part                                                                                                                                                                                                                                                                                                                                   |
| TI/TP-4/2.13 | <b>Duties of TNC -</b> <ul style="list-style-type: none"> <li>• Repeating yard position</li> <li>• Out report</li> <li>• Keeping yard balance, Stock Report - for Coaching and Goods</li> <li>• Calculating load tonnage</li> <li>• Preparation of Vehicle Guidance – manually, through FOIS or ICMS</li> <li>• Offering of rake / load for examination / precaution after examination</li> </ul> |
| TI/TP-4/2.14 | Registers maintained by TNC at station / yard / control office                                                                                                                                                                                                                                                                                                                                    |

| TI/TP-4/3   | TRANSPORTATION - 2                                                     |
|-------------|------------------------------------------------------------------------|
| TI/TP-4/3.1 | Indent, allotment and supply of wagons                                 |
| TI/TP-4/3.2 | Commercial placement and release, Labeling, Riveting and sealing,      |
| TI/TP-4/3.3 | Weighment and Re-weighment of goods                                    |
| TI/TP-4/3.4 | Demurrage and wharfage rules, Stacking                                 |
| TI/TP-4/3.5 | Sidings – types, siding charges, freight and shunting charges          |
| TI/TP-4/3.6 | Unconnected wagons and NR cell                                         |
| TI/TP-4/3.7 | Permissible Carrying capacity of Wagons (PCC), uneven and overloading, |

| TI/TP-4/4    | TRANSPORTATION - 3                                                                                                |
|--------------|-------------------------------------------------------------------------------------------------------------------|
| TI/TP-4/4.1  | Role of TNC in train operation.                                                                                   |
| TI/TP-4/4.2  | Important rules regarding working of trains.                                                                      |
| TI/TP-4/4.3  | Function of control organization.                                                                                 |
| TI/TP-4/4.4  | Activities in station / yard / control office                                                                     |
| TI/TP-4/4.5  | Various types of coaching and goods stock, Rake Links                                                             |
| TI/TP-4/4.6  | Census, stock report.                                                                                             |
| TI/TP-4/4.7  | Goods train operation, Train ordering, pre departure detention causes and remedial measures, Block Rake operation |
| TI/TP-4/4.8  | Divisional wagon balance                                                                                          |
| TI/TP-4/4.9  | Interchange                                                                                                       |
| TI/TP-4/4.10 | Marshalling yard, shunting memo preparation after shunting (cut card), Yard congestion                            |
| TI/TP-4/4.11 | Wagon pool                                                                                                        |
| TI/TP-4/4.12 | Wagon turn round, Throughput                                                                                      |
| TI/TP-4/4.13 | Operating statistics, Operating Ratio                                                                             |
| TI/TP-4/4.14 | Morning position, Factors Affecting Train Operation (FATO)                                                        |
| TI/TP-4/4.15 | Marshaling of goods and coaching trains, Ghat Marshalling, rake link.                                             |
| TI/TP-4/4.16 | Wagon placement and removal                                                                                       |
| TI/TP-4/4.17 | Axle load, requirement of banker engine.                                                                          |
| TI/TP-4/4.18 | Close circuit rakes, Premium, end to end rake and Container rakes.                                                |
| TI/TP-4/4.19 | Punctuality of trains                                                                                             |
| TI/TP-4/4.20 | Engine usage, outage                                                                                              |

| TI/TP-4/5   | TRANSPORTATION - 4                                                                                                                                                                                                                                                                                                   |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TI/TP-4/5.1 | Brake system and Advantage of Air Brake<br>Brief idea of braking system. Various Parts and their function. Advantages of Air Brake System. Amount of Air Pressure in Loco and brake van. Continuity test.                                                                                                            |
| TI/TP-4/5.2 | Examination of trains – Various types of examinations of coaching stocks, Primary and secondary maintenance, Other end attention, Rake link, Various types of examination of Goods stocks, Intensive Examination , CC, Premium rake, Brake power certificate, Safe to run certificate, GDR, working of stabled load, |
| TI/TP-4/5.3 | Nomenclature of Coaching and Goods Stocks., Knowledge of latest coaching and goods stock.                                                                                                                                                                                                                            |

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| TI/TP-4/6   | SAFETY MANAGEMENT                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TI/TP-4/6.1 | <b>Accident –</b> <ul style="list-style-type: none"> <li>• Definition, Classification,</li> <li>• Sounding of Hooter, Movement of Relief trains</li> <li>• Running of ART/SPART, ARME/SPARME, Break down Special, Target Time,</li> <li>• Various Accident Forms,</li> <li>• Fire on Trains, Hot Axle,</li> <li>• Causes of accidents</li> <li>• Chronological Register (Log Book)</li> </ul> |
| TI/TP-4/6.2 | <b>Disaster Management</b> – Introduction, Various Organizations, Developments on DM at National level, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance.                                                                                                                                                  |
| TI/TP-4/6.3 | <b>Fire Fighting</b> – Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire. Half Day for Hands on Practice.                                                                                                                                                                                  |

| TI/TP-4/7   | INFORMATION TECHNOLOGY                                                                       |
|-------------|----------------------------------------------------------------------------------------------|
| TI/TP-4/7.1 | Computerization in Indian Railways                                                           |
| TI/TP-4/7.2 | Basic Knowledge of Computers(Word, Excel, Power Point), Means of Social Media and their uses |
| TI/TP-4/7.3 | FOIS, RMS,TMS, COIS, ICMS, PAM, CMS, NTES, COA, WILD, SIMRAN, SATSANG etc.                   |
| TI/TP-4/7.4 | Preparation of Late Train Movement (LTM) in PAM.                                             |
| TI/TP-4/7.5 | Hand on Practice on FOIS, ICMS, CMS etc.                                                     |

| TI/TP-4/8   | ETHICAL LEADERSHIP & SOFT SKILL                                                                                                  |
|-------------|----------------------------------------------------------------------------------------------------------------------------------|
| TI/TP-4/8.1 | Ethics – Meaning, Role, Need, Value and Importance in public life.                                                               |
| TI/TP-4/8.2 | Leadership – Meaning, Role, Need, Value and Importance, Team building, Crowded/Mob Management.                                   |
| TI/TP-4/8.3 | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience. |
| TI/TP-4/8.4 | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life.                            |
| TI/TP-4/8.6 | Soft Skills – Meaning, Requirements and its importance in public life.                                                           |
| TI/TP-4/8.7 | Yoga, PT, Meditation and Shramdan.                                                                                               |
| TI/TP-4/8.8 | Sports                                                                                                                           |

| TI/TP-4/9   | FIELD TRAINING                                                    |
|-------------|-------------------------------------------------------------------|
| TI/TP-4/9.1 | Practical Field Training (4 Days -2 Days Coaching + 2 Days Goods) |

| TI/TP-4/10   | EXAMINATION                                                                                       | Day | Hours |
|--------------|---------------------------------------------------------------------------------------------------|-----|-------|
| TI/TP-4/10.1 | <b>Paper – 1 (Transportation)</b><br><b>Max Marks: 100</b> [Obj: 40 Marks; Descriptive: 60 Marks] | 1   | 3     |

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Training Module for Cabin Man/Points Man/Lever Man/Gate Man – Initial/Promotion

| | |
|------------|--|
| Department | Transportation |
| Course No. | TI/TP-5 |
| Category | Cabin Man/Points Man/Lever Man/Gate Man |
| Stage | Initial / Promotion |
| Duration | 24 Working Days = 144 Hours |

| Module No. | Description | Hours | Days |
|------------|--|------------|-----------|
| TI/TP -5/1 | Foundation Course | 06 | 01 |
| TI/TP -5/2 | Transportation -1 (Lower Transportation) | 66 | 11 |
| TI/TP -5/3 | Transportation -1 (Commercial) | 06 | 01 |
| TI/TP -5/4 | Transportation – 4 (Other Department) | 12 | 02 |
| TI/TP -5/5 | Safety Management | 12 | 02 |
| TI/TP -5/6 | Information Technology | 12 | 02 |
| TI/TP -5/7 | Ethical Leadership & Soft Skills | 12 | 02 |
| TI/TP -5/8 | Field Training (2 Days x 6 Hours) | 12 | 02 |
| TI/TP -5/9 | Examination | 06 | 01 |
| | TOTAL | 144 | 24 |

| TI/TP -5/1 | FOUNDATION COURSE |
|--------------|---|
| TI/TP -5/1.1 | Admission formalities. |
| TI/TP -5/1.2 | History and development of Indian Railways. Organisation of Indian Railways. Various departments of Railways, their functions, Various organisations working under Ministry of railways. Future strategies. |
| TI/TP -5/1.3 | Operating department organisation at various level, its functions and objectives etc. Safety in train operation, CRS and functions. |
| TI/TP -5/1.4 | Establishment, Organisation and functions. Leave & Pass rules, TA& DA rules, Main provisions of Service Conduct Rules, 1966, HWPR(HOER) and preliminary idea of D&AR, New pension scheme, RTI. |

| TI/TP -5/2 | TRANSPORTATION - 1 |
|---------------|---|
| TI/TP -5/2.1 | General Introduction of Railway and Transportation branch. Introduction of ZRTI setup, Syllabus, Timing, Examination pattern and future prospects. |
| TI/TP -5/2.2 | Role and responsibility for safety in railway transportation. |
| TI/TP -5/2.3 | Conduct of Railway servants. |
| TI/TP -5/2.4 | Important Definitions of Chapter – 1 of G & SR. |
| TI/TP -5/2.5 | Classification of stations, Minimum signals at different classes of stations. |
| TI/TP -5/2.6 | Signal - <ul style="list-style-type: none"> • Two and Multiple aspect Semaphore and Colour Light signals, • Fixed Signal – Approach, Departure, Subsidiary – description and identification of each signal, distinguishing marks on signal, aspect and indication of signal, • Working of signal – mechanically and electrically, • Hand signal – upkeep and use of hand signal in train working and during shunting, • Detonating signal – description and use in thick & foggy weather and in accident/obstruction, VTO, Fog signal post. |
| TI/TP -5/2.7 | Point - <ul style="list-style-type: none"> • Types of points (Facing, Trailing, Trap, Permanent Locked etc.) and their component. • Securing of point, clamp and padlock, key locking, plunger bolt locking, facing point lock, lock bar, track circuits, axle counter. • Working of point by mechanically through rodding or double wiring or by electrically through motor operation, use of crank handle. • Pull sheet, Painting of lever, clutch resetting lever, compensator. |
| TI/TP -5/2.8 | Description of Point Indicator, Trap indicator, SPI, signal repeater, route indicator, SLB, BSLB etc., Indications in cabin. |
| TI/TP -5/2.9 | Working of trains during failure of point, signal or other S&T gear, precaution during failure, Disconnection and Reconnection, precaution during disconnection. |
| TI/TP -5/2.10 | Brief knowledge about various system of working on Indian Railways, Absolute Block System – Essentials, Condition for granting line clear and taking off signals, |
| TI/TP -5/2.11 | Interlocking - <ul style="list-style-type: none"> • Definition, types of interlocking, standards of interlocking, Key transmitters, Mechanical/Electrical Slotting. • Isolation – setting of points and cross-over by means of snag dead ends, sand humps, derailing switch, scotch block. |
| TI/TP -5/2.12 | Shunting rule at single and double line station, precautions and use of fixed signal during shunting, control of shunting, prohibition of shunting. |
| TI/TP -5/2.13 | Securing of vehicles in running line and non-running line, vehicle running away. |
| TI/TP -5/2.14 | Procedure for reception and despatch of trains at different classes of stations on single and double line, ringing of station/platform bell, |
| TI/TP -5/2.15 | <ul style="list-style-type: none"> • Reception of trains on obstructed or non-signalled line, despatch of train from non-signalled line or from a line having common starter signal, • Working of trains during failure of block instrument, • Working of train without Guard/Brake-Van, • TSL working, |

| | |
|----------------|--|
| I/3117998/2025 | <ul style="list-style-type: none"> • Sending of Engine/train in to obstructed block section. |
| TI/TP -5/2.16 | Action to be taken when – <ul style="list-style-type: none"> • A train parts, • A train is to be divided in the block section, • Fire on a vehicle, • Patrolman becomes overdue, • Abnormal conditions reported on track, • Run away train, • Thick & Foggy weather, • Hanging part in the train, • Hot axle in the train, • Falling goods from wagon, • train passing without TL/TB. • regarding complete arrival of train, • clearance of fouling mark, • reversal of point, • using of stop collar, • ensuring of normal position of signal and indication after arrival of train, • watching of train passing through cabin, • exchanging of signal with station staff/train crew |
| TI/TP -5/2.17 | Working of Level Crossing Gates under normal and abnormal circumstances, Gate working rules, equipments. |
| TI/TP -5/2.18 | Means of communication and their use. |
| TI/TP -5/2.19 | Train Signal Register, Line Concurrence book, Private Number book, Station bells, Bell code signals, Engine whistle codes, Brief idea about Caution order and other important paper authorities. |
| TI/TP -5/2.20 | Catch and Slip Sidings, station sidings. |
| TI/TP -5/2.21 | Importance, understanding and signing on Assurance Register. |

| TI/TP -5/3 | TRANSPORTATION - 2 (COMMERCIAL) |
|--------------|--|
| TI/TP -5/3.1 | Brief knowledge of organisation and functions of Commercial Department |
| TI/TP -5/3.2 | Basic knowledge of Ticket, different kinds of ticket, Journey & Non journey tickets. |
| TI/TP -5/3.3 | Basic knowledge of Goods sheds, Papers used at Goods shed, Precautions during loading and unloading at Goods shed, Packing, Labelling & Marking. |
| TI/TP -5/3.4 | Role as a railwayman to reduce claims, Child protection Act. |

| TI/TP -5/4 | TRANSPORTATION - 4 |
|-------------------|---|
| ELECTRICAL | |
| TI/TP -5/4.1 | General idea of electrified section, important component and their use, precaution during shunting, operation of isolator switch, Local and power block. |
| MECHANICAL | |
| TI/TP -5/4.2 | Brief idea of braking system. Difference between Vacuum brake and Air Brake system, Advantages of Air Brake System. Working of Single Pipe and Double Pipe Air Brake System. Continuity test and its importance, Various components |

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| | |
|--------------|--|
| | of vacuum brake system and air brake system. |
| TI/TP -5/4.3 | Brake Power and Brake Power Certificate, Alarm chain pulling – resetting/isolating, Causes of Brake Binding and its releasing, Flat tyre and its movement. |
| TI/TP -5/4.4 | Brief idea of new rolling coaching and goods stock including LHB coach, important under gear component and their use, different types of couplings, method and precaution of attaching/detaching of vehicle. |

| TI/TP -5/5 | SAFETY MANAGEMENT |
|--------------|---|
| TI/TP -5/5.1 | Accidents – <ul style="list-style-type: none"> • Definition, Classification • Consequential & other Train accidents • Indicative Accidents – Class F, G & H • Sounding of Hooter, Movement of Relief trains • Running of ART, ARME, Target Time • Protection of line, Preservation clues at the site • Fire on Trains, Hot Axle, Train Parting / Dividing |
| TI/TP -5/5.2 | Disaster Management – Introduction, Golden Hour |
| TI/TP -5/5.3 | First Aid – (Theory & Practical) Aims and Objective of First Aid. Half day Hands on Practice. |
| TI/TP -5/5.4 | Fire Fighting – Theory & Demonstration, Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher, Hands on Practice. |

| TI/TP -5/6 | INFORMATION TECHNOLOGY |
|--------------|--|
| TI/TP -5/6.1 | Computerization in Indian Railways |
| TI/TP -5/6.2 | Basic Knowledge of Computers(Word, Excel, Power Point), Means of Social Media and their uses |
| TI/TP -5/6.3 | Overview of various IT applications on Indian Railways. |
| TI/TP -5/6.4 | Hands on Practice. |

| TI/TP -5/7 | ETHICAL LEADERSHIP & SOFT SKILL |
|--------------|---|
| TI/TP -5/7.1 | Ethics – Meaning, Role, Need, Value and Importance in public life. |
| TI/TP -5/7.2 | Leadership – Meaning, Role, Need, Value and Importance. |
| TI/TP -5/7.3 | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life. |
| TI/TP -5/7.4 | Soft Skills – Meaning, Requirements and its importance in public life. |
| TI/TP -5/7.5 | Yoga, PT, Meditation and Shramdan. |
| TI/TP -5/7.6 | Sports |
| TI/TP -5/8 | FIELD TRAINING |
| TI/TP -5/8.1 | Study Tour during the Training Course at ZRTI (2 days) |

| TI/TP -5/9 | EXAMINATION | Day | Hours |
|--------------|--|-----|-------|
| TI/TP -5/9.1 | Paper – 1 (Transportation)
Max Marks: 100 [Obj: 40 Marks; Descriptive: 60 Marks]
Model Room viva test | 1 | 3 |

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## Training Module for Shunting Master/Jamadar Promotion

|                   |                                                   |
|-------------------|---------------------------------------------------|
| <b>Department</b> | <b>Transportation</b>                             |
| Course No.        | <b>TP-6</b>                                       |
| Category          | <b>Shunting Master/Shunting Jamadar</b>           |
| Stage             | <b>Promotion through Departmental Examination</b> |
| Duration          | <b>21 Working Days = 126 Hours</b>                |

| <b>Module No.</b> | <b>Description</b>                       | <b>Hours</b> | <b>Days</b> |
|-------------------|------------------------------------------|--------------|-------------|
| TP-6/1            | Foundation Course                        | 06           | 01          |
| TP-6/2            | Transportation -1 (Lower Transportation) | 36           | 06          |
| TP-6/3            | Transportation – 4 (Other Department)    | 06           | 01          |
| TP-6/4            | Safety Management                        | 12           | 02          |
| TP-6/5            | Ethical Leadership & Soft Skills         | 18           | 03          |
| TP-6/6            | Information Technology                   | 18           | 03          |
| TP-6/7            | Field Training (4 Days x 6 Hrs)          | 24           | 04          |
| TP-6/8            | Examination                              | 06           | 01          |
|                   | <b>TOTAL</b>                             | <b>126</b>   | <b>21</b>   |



| <b>TP-6/1</b> | <b>FOUNDATION COURSE</b>                                                                                                                                                                                    |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-6/1.1      | Admission formalities.                                                                                                                                                                                      |
| TP-6/1.2      | History and development of Indian Railways. Organisation of Indian Railways. Various departments of Railways, their functions, Various organisations working under Ministry of railways. Future strategies. |
| TP-6/1.3      | Operating department organisation at various level, its functions and objectives etc. Safety in train operation, CRS and functions.                                                                         |
| TP-6/1.4      | Establishment, Organisation and functions. Leave & Pass rules, TA& DA rules, Main provisions of Service Conduct Rules, 1966, HWPR (HOER) and preliminary idea of D&AR, New pension scheme, RTI.             |

| <b>TP-6/2</b> | <b>TRANSPORTATION - 1</b>                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-6/2.1      | General Introduction of Railway and Transportation branch. Introduction of ZRTI setup, Syllabus, Timing, Examination pattern and future prospects.                                                                                                                                                                                                                                              |
| TP-6/2.2      | Responsibility of railway employee in respect of their duties and Railways safety.                                                                                                                                                                                                                                                                                                              |
| TP-6/2.3      | Brief idea of Important Definitions of G & SR.                                                                                                                                                                                                                                                                                                                                                  |
| TP-6/2.4      | Classification of stations, Minimum signals at different classes of stations.                                                                                                                                                                                                                                                                                                                   |
| TP-6/2.5      | Brief idea of Fixed signals with special reference to Shunt signals, Hand signals, Fog signals. Points and Trap Indicators, SPI, SLB and BSLB.                                                                                                                                                                                                                                                  |
| TP-6/2.6      | Types of points and their working, locking of points at interlocked and non-interlocked stations, clamping and cotter bolting of point to avoid any chances of derailment and point bursting.                                                                                                                                                                                                   |
| TP-6/2.7      | Train and shunting movement during failure of signal and point, precaution during thick& foggy weather.                                                                                                                                                                                                                                                                                         |
| TP-6/2.8      | Brief idea of Absolute Block System and Automatic Block System, working of LC Gate.                                                                                                                                                                                                                                                                                                             |
| TP-6/2.9      | Kinds of shunting, shunting rules, precautions during shunting, persons authorised to supervise shunting & their responsibility. Issue of shunting order and shunting certificates, shunting speeds, different shunting stages.                                                                                                                                                                 |
| TP-6/2.10     | Stabling and Securing of vehicles/Locos on running line and non-running line.                                                                                                                                                                                                                                                                                                                   |
| TP-6/2.11     | Definition, brief idea of marshalling of different trans, necessity of marshalling. Attaching of vehicles outside rear brake van, attaching of four wheeled vehicles in passenger trains, attaching of vehicles containing live stock, explosive, Dead engine and dangerous goods. Attaching of saloons, Inspections carriage, through sectional and slip coaches, Planned formation of trains. |
| TP-6/2.12     | Design, component and working of Marshalling yards.                                                                                                                                                                                                                                                                                                                                             |
| TP-6/2.13     | Brief idea of Wagon Pool. Pooled wagons, NP Wagons, Local loading stock and departmental stock, wagon census.                                                                                                                                                                                                                                                                                   |
| TP-6/2.14     | Nomenclature of various Coaching and Goods stocks.                                                                                                                                                                                                                                                                                                                                              |
| TP-6/2.15     | Duties of Shunting Master/Jamadar regarding safety of trains and to avoid detention.                                                                                                                                                                                                                                                                                                            |
| TP-6/2.16     | Standard Moving Dimensions, ODC and their movement, Speed of ODC.                                                                                                                                                                                                                                                                                                                               |

| TP-6/3 TRANSPORTATION - 4 |                                                                                                                                                                                                                                                                                  |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL</b>         |                                                                                                                                                                                                                                                                                  |
| TP-6/3.1                  | General idea of electrified section, important component and their use, precaution during shunting on unwired lines, operation of isolator switch, Local and power block.                                                                                                        |
| <b>MECHANICAL</b>         |                                                                                                                                                                                                                                                                                  |
| TP-6/3.2                  | Brief idea of braking system. Difference between Vacuum brake and Air Brake system, Advantages of Air Brake System. Working of Single Pipe and Double Pipe Air Brake System. Continuity test and its importance, Various components of vacuum brake system and air brake system. |
| TP-6/3.3                  | Brake Power Certificate, percentage of brake power required in Passenger/Mixed/Goods trains, Alarm chain pulling – resetting/isolating, Causes of Brake Binding and its releasing, Flat tyre and its movement.                                                                   |
| TP-6/3.4                  | Brief idea of new rolling coaching and goods stock including LHB coach, important under gear component and their use, different types of couplings, method and precaution of attaching/detaching of vehicle.                                                                     |

| TP-6/4 SAFETY MANAGEMENT |                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-6/4.1                 | <b>Accidents –</b> <ul style="list-style-type: none"> <li>• Definition and Classification</li> <li>• Sounding of Hooters, Movement of Relief trains</li> <li>• Running of ART, ARME, Hooters, Target Time</li> <li>• Protection of line, Preservation clues at the site</li> <li>• Fire on Trains, Hot Axle, Hanging part, Open door, Load shifting</li> </ul>   |
| TP-6/4.2                 | <b>Disaster Management</b> – Introduction, Golden Hour                                                                                                                                                                                                                                                                                                           |
| TP-6/4.3                 | <b>First Aid</b> – (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs.<br>Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half Day Hands on Practice. |
| TP-6/4.4                 | <b>Fire Fighting</b> – Theory & Demonstration, Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Hands on Practice.                                                                                                                                                              |

| TP-6/5 ETHICAL LEADERSHIP & SOFT SKILL |                                                                                                       |
|----------------------------------------|-------------------------------------------------------------------------------------------------------|
| TP-6/5.1                               | Ethics – Meaning, Role, Need, Value and Importance in public life.                                    |
| TP-6/5.2                               | Leadership – Meaning, Role, Need, Value and Importance.                                               |
| TP-6/5.3                               | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life. |
| TP-6/5.4                               | Soft Skills – Meaning and Requirements.                                                               |
| TP-6/5.5                               | Yoga, PT, Meditation and Shramdan.                                                                    |
| TP-6/5.6                               | Sports                                                                                                |

| TP-6/6 INFORMATION TECHNOLOGY |                                                       |
|-------------------------------|-------------------------------------------------------|
| TP-6/6.1                      | Computerization in Indian Railways and its advantages |

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|               |                                                                                                |
|---------------|------------------------------------------------------------------------------------------------|
| TP-6/6.2      | Basic Knowledge of Computers (Word, Excel, Power Point), Means of Social Media and their uses. |
| TP-6/6.3      | FOIS, RMS,TMS, COIS, NTES etc- an overview                                                     |
| <b>TP-6/7</b> | <b>FIELD TRAINING</b>                                                                          |
| TP-6/7.1      | Field Training for 6 Days                                                                      |

|               |                                                      |             |              |
|---------------|------------------------------------------------------|-------------|--------------|
| <b>TP-6/8</b> | <b>EXAMINATION</b>                                   | <b>Days</b> | <b>Hours</b> |
| TP-6/8.1      | <b>Paper – 1 (Transportation)</b> - Max. Marks = 100 | 1           | 3            |

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Training Module for Passenger Guard Promotion

| | |
|------------|----------------------------|
| Department | Transportation |
| Course No. | TP-7 |
| Category | Passenger Guard Promotion |
| Stage | Departmental Promotion |
| Duration | 06 Working Days = 36 Hours |

| Module No. | Description | Hours | Days |
|------------|--|-----------|-----------|
| TP-7/1 | Transportation - 1 (Lower Transportation) | 09 | 1½ |
| TP-7/2 | Transportation - 2 (Commercial) | 03 | ½ |
| TP-7/3 | Transportation - 3 (Higher Transportation) | 03 | ½ |
| TP-7/4 | Transportation - 4 (Other Department) | 06 | 01 |
| TP-7/5 | Safety Management | 03 | ½ |
| TP-7/6 | Ethical Leadership & Soft Skill | 03 | ½ |
| TP-7/7 | Information Technology | 03 | ½ |
| TP-7/8 | Examination | 06 | 01 |
| | TOTAL | 36 | 06 |

| TP-7/1 | TRANSPORTATION - 1 |
|-----------|---|
| TP-7/1.1 | Admission formalities, Role and importance of Guard in Railway Transportation, Learning Road, Sign-on and Sign-off, 09ours Rule, Rest at HQ/out of HQ. |
| TP-7/1.2 | Use of signals during train working, non-interlocking point, its locking and reversal of point on single line and double line station. |
| TP-7/1.3 | Tail Lamp/Board, Side/Flasher/ Head Light, Working of EMU/DMU/MEMU trains, speed of trains in different conditions, Failure of Head Light. |
| TP-7/1.4 | Standard time, Adherence to advertise time, setting of watch, Starting of trains, MPS, Booked speed, Minimum running time, normal running time, recovery time, Equipment of Passenger Guard and Brake-van. |
| TP-7/1.5 | Signal exchanging between LP, Guard and SM, Whistle code, Precaution during crossing of trains at station, and passing train from adjacent line in block section. |
| TP-7/1.6 | Stabling and securing of vehicle at station and in siding, Checking safe condition of train before starting, procedure to start a Passenger train, Briefing about Special/VIP train. |
| TP-7/1.7 | Shunting method, stage and responsibility, Block rake of passenger, Marshalling of Dead Engine, Inspection Carriage, Crane. |
| TP-7/1.8 | Reception of train on obstructed line/non-signalled line, Dispatch of train from non-signalled line or from a line having common starter signal. |
| TP-7/1.9 | Working of trains during following –
Obstruction, Sending of Relief Engine/Train, TSL, Total Interruption of communication, Train Parting, Abnormal working during Prolonged failure of Automatic signal, abnormal condition, protection of train, fire in train, Train overdue, OHE faulty etc. |
| TP-7/1.10 | Duties of Guard in following conditions – <ul style="list-style-type: none"> • Gate Stop signal fail • Automatic Stop signal in on position • IBS in on position • Fouling mark jam • Thick & Foggy weather • Pushing back of train • First Stop signal in ON position • Roof Travelling • Alarm Chain pulling • Protection of train. • Overshooting of stop board/mark and platform • Cattle run over, run over, • Knocking down, • Murder and serious assault, • Falling down of passenger, • Track defect |
| TP-7/1.11 | Discussion on latest Railway Board/HQ Circulars, JPO, Safety Circulars and latest Amendment Slips of G&SR, Accident Manual and Operating manual, Knowledge of recent new technology. |

| TP-7/2 TRANSPORTATION - 2 | |
|---------------------------|---|
| TP-7/2.1 | Kinds of Tickets and Warrants, Guard Certificate, |
| TP-7/2.2 | various types of passenger trains, Classes of Accommodation |
| TP-7/2.3 | Declaration of Private cash |
| TP-7/2.4 | Luggage and Parcel booking, Roll of Guard in carrying of Luggage/Parcel, Precautions to be observed while loading and unloading, Importance of PW Bill/Luggage Ticket for Guard, Over carriage of parcel, prevention of over carriage and disposal of over carried parcel, |
| TP-7/2.5 | Action to be taken in case of seal missing, defective locking or defective seals or when it appears to be tampered with. Checks to be exercised to detect defective seals or locks. Running train thefts. |
| TP-7/2.6 | Various sections of Railway Act-1989. Statutory obligation of Railway towards public and vice versa. Provision of sections of 123 to 129 of Railway Act.- 1989, Common Carrier liability of Railway for luggage and parcels. |
| TP-7/2.7 | Rules for travelling in brake-van/SLR, |
| TP-7/2.8 | Passenger Complaint Book. |
| TP-7/2.9 | Discussion on various latest circulars/policies |
| TP-7/3 TRANSPORTATION - 3 | |
| TP-7/3.1 | WTT, PTT, Punctuality of trains, factor affecting punctuality of trains, rake link, crew link, engine link, <ul style="list-style-type: none"> • Introduction, Kavach and its Sub Systems :Salient features of Kavach , Components of Kavach, Kavach arrangements in station at a glance, Loco Kavach at a glance, Radio Frequency Identification (RFID) Tags, Working Principle. • Operational Modes of Onboard Kavach for Version 4.0: Driver Machine Interface (DMI) at a glance, Different Types of Operational Modes of Onboard Kavach for Version 4.0, Mode Transitions in Kavach Ver 4.0, Features available at different Operational Modes in Kavach. |
| TP-7/3.2 | Use of Field Telephone. |
| TP-7/4 TRANSPORTATION - 4 | |
| MECHANICAL | |
| TP-7/4.1 | Advantage of Air Brake System, Working of double pipe Air Brake System, Continuity test of Passenger, Brief idea of new rolling stock. |
| TP-7/4.2 | Specific features of new locomotives, hauling capacity, LHB coaches etc. |
| TP-7/4.3 | Primary and Secondary Examination of train, BPC and its validity, Percentage of brake power required in trains. |
| TP-7/4.4 | Alarm chain pulling – resetting/isolating, causes of brake binding and its releasing. |
| TP-7/4.5 | Working of train having flat Tyre. Stages of Hot Axle. |
| ELECTRICAL | |
| TP-7/4.6 | Brief idea of OHE and precaution during fault and accident, Brief idea of latest train lighting system, duties of Guard in respect of train lighting, ETL Box, DRS Card. |

| TP-7/5 | SAFETY MANAGEMENT |
|----------|--|
| TP-7/5.1 | <p>Accidents – Definitions, Threshold Value, Classification, Reporting, Assistance Protocol.</p> <ul style="list-style-type: none"> • Consequential, Indicative and other Train accidents • Sounding of Hooter, Movement of Relief trains • Chain of command during accident, Running of ART/SPART, ARME/SPARME, Break down Special, Target Time, • Protection of line, Preservation of clues at the site • Various Accident Forms, • Duties of SM, Guard, LP, Controller and Supervisors of various department in case of Serious Accidents • Slack, Rough running reported by LPs / Guards • Fire on Trains, Hot Axle, Train Parting / Dividing • Prima-facie cause of accident, Reading and measurement at accident site by Supervisors and preparation of Joint Note • Ex-gratia payments • Causes of accidents and remedial measures, Accident enquiries, Levels of Enquiry, role of Guard. |
| TP-7/5.2 | <p>Disaster Management – Introduction, Various Organizations, Developments on DM at National level, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used for assistance. Working of trains during disasters (Floods, Cyclones, Earthquakes etc)</p> |
| TP-7/5.3 | <p>Guest lecture - by Divisional Officers / Supervisory Officials and Safety Counsellors on "Accident Management"</p> |
| TP-7/5.4 | <p>First Aid – (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs. Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half Day Hands on Practice.</p> |
| TP-7/5.5 | <p>Fire Fighting – Theory & Demonstration, Civil defence. Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire. Half Day Hands on Practice.</p> |

| TP-7/6 | ETHICAL LEADERSHIP & SOFT SKILL |
|----------|---|
| TP-7/6.1 | Ethics – Meaning, Role, Need, Value and Importance in public life. |
| TP-7/6.2 | Leadership – Meaning, Role, Need, Value and Importance, Team building, Crowded/Mob Management. |
| TP-7/6.3 | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience, Brain Storming, Perception. Forgiveness, Case studies/ inspirational videos. |
| TP-7/6.4 | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life. |
| TP-7/6.5 | Customer care - Public perception, public relations, courtesy, Customer service its importance and provision. |
| TP-7/6.6 | Soft Skills – Meaning, Requirements and its importance in public life. |
| TP-7/6.7 | Yoga, PT, Meditation and Shramdan. |
| TP-7/6.8 | Sports |

| TP-7/7 INFORMATION TECHNOLOGY | |
|-------------------------------|---|
| TP-7/7.1 | Computerization in Indian Railways |
| TP-7/7.2 | Basic Knowledge of Computers (Word, Excel, Power Point presentation), Means of Social Media and their uses |
| TP-7/7.3 | FOIS, RMS, TMS, COA, COIS, ICMS, PAM, NTES, WILD, SIMRAN, SATSANG etc- an overview. Kavach Related FAQ |
| TP-7/7.4 | CMS training |
| TP-7/7.5 | Hand on Practice. |

| TP-7/8 EXAMINATION | | Day | Hours |
|--------------------|--|-----|-------|
| TP-7/8.1 | Paper – 1
(Transportation and Others)
Max Marks: 100 [Obj: 40 Marks; Descriptive: 60 Marks] | 1 | 3 |

Training Module for Cabin Master- Promotion

| | |
|------------|---|
| Department | Transportation |
| Course No. | TP-8 |
| Category | Cabin Master/Switch Man |
| Stage | Promotion through Departmental Examination |
| Duration | 36 Working Days = 216 Hours |

| Module No. | Description | Hours | Days |
|-------------------|--|--------------|-------------|
| TP-8/1 | Foundation Course | 06 | 01 |
| TP-8/2 | Transportation -1 (Lower Transportation) | 90 | 15 |
| TP-8/3 | Transportation - 4 (Other Department) | 18 | 03 |
| TP-8/4 | Safety Management | 18 | 03 |
| TP-8/5 | Information Technology | 30 | 05 |
| TP-8/6 | Ethical Leadership & Soft Skills | 18 | 03 |
| TP-8/7 | Field Training (4 Days x 6 Hrs) | 24 | 04 |
| TP-8/8 | Examination | 12 | 02 |
| | TOTAL | 216 | 36 |

| TP-8/1 | FOUNDATION COURSE |
|----------|---|
| TP-8/1.1 | Admission formalities. |
| TP-8/1.2 | History and development of Indian Railways. Organisation of Indian Railways. Various departments of Railways, their functions, Various organisations working under Ministry of railways. Future strategies. |
| TP-8/1.3 | Operating department organisation at various level, its functions and objectives etc. Safety in train operation, CRS and functions. |
| TP-8/1.4 | Establishment, Organisation and functions. Leave & Pass rules, TA& DA rules, Main provisions of Service Conduct Rules, 1966, HWPR(HOER) and preliminary idea of D&AR, New pension scheme, RTI. |
| TP-8/1.5 | Rajbhasha - responsibility of railway servants in implementing Rajbhasha, Various Incentives Schemes |

| TP-8/2 | TRANSPORTATION -1 |
|----------|---|
| TP-8/2.1 | Introduction, G&SR, BWM, AM, OM, WTT, SWR, Chapter No. 01 & 02 of G & SR, Rules applying to Railway Servants |
| TP-8/2.2 | Signals: <ul style="list-style-type: none"> – Evolution of Signals – Fixed Signals in Multiple Aspect Territory – Distant, Inner Distant, Combination of Distant Signal with Last Stop Signal & Gate Stop Signal – Home, Routing Home – Starter, Inter Starter, Advanced Starter – Calling-on Signal – Shunt Signal – Types – Gate Stop Signal – with & without 'G' Marker – Intermediate Block Stop Signal – All Hand Signals & their Occasions – Fog/Detonating Signal, Fog Signalling, Warning Signal & Demo |
| TP-8/2.3 | Isolation & Interlocking |
| TP-8/2.4 | Indicators – Point, Trap, Route & Shunting Permitted Indicator |
| TP-8/2.5 | Boards – Warning Boards (Passenger, Goods, Shunting & Station), Shunting/Block Section Limit Board, Caution & Termination Indication Boards, Sign-A & B Boards, etc |
| TP-8/2.6 | Classification of Stations, Minimum Equipment of Signals in Multiple Aspect Area, Station Section, Block Section-Conditions for granting Line Clear, Station Diagrams with MAUQ/MACL Signals at Different Classes of Stations |
| TP-8/2.7 | Conditions for taking 'off' Signals |
| TP-8/2.8 | Points & setting of Points, |
| TP-8/2.9 | Failure of Points – Use of S&T(NM), S&T(DN), Hands on Training on Crank Handle, Clamping & padlocking of Points, Use of Through bolt & cotter, etc |

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|-----------|--|
| TP-8/2.10 | Signal Failure <ul style="list-style-type: none"> • Failure of all Signals-Reception & Departure Stop Signals • Passing Intermediate Block Stop Signal at 'ON' • Passing Gate Stop Signal at "ON" • Reception on Obstructed/ Non-Running/Non-Signalled Road • Despatch from a Non- Running / Non-Signalled Road, a line out of group of lines with Common Starter |
| TP-8/2.11 | <p>Panel, Panel buttons and their use, Lever frame – different levers and their use. Use of Lever Collar, Slide Pin, Button Cap and Key of SM's slide, Block Instrument Key, caution plate, no voltage plate/button collar</p> <ul style="list-style-type: none"> • Normal Reception & Despatch • R&D during Signal Failure, Point Failure, Panel Failure • Shunt Movements |
| TP-8/2.12 | Working of Trains generally : <ul style="list-style-type: none"> • Various Systems of working • Conditions and precautions for granting line clear and clearing back section • Important papers, P.No. Sheet, TSR and precautions while using them. • Working of trains in Thick and foggy weather. • Procedure for draw ahead of train up to fouling mark when fouling mark is not clear • Procedure for draw ahead of train up to last stop signal when train waiting for line clear • Engine Whistle codes • Procedure for put back of signals • Standard Time • Speed-Maximum Permissible Speed & Booked Speed • Time Table (PTT & WTT),Speed over Facing Points • Engine Pushing, Pushing back in absolute and automatic block system • Trains without Guard / BV / Guard & BV • Whistle Codes & Bell Codes • Working of Material Train & Track Maintenance Machine |
| TP-8/2.13 | Control & Working of Stations : <ul style="list-style-type: none"> • General duties • SWR-Contents, P.Way, Rule Diagram & OHE sectioning diagram-Rules for working in Electrified Section- Appendix 'G' • Shunting – Definition, Types, Control & Supervision of Shunting, Shunting on Gradients, Shunting Authorities, Shunting Techniques to maintain fluidity in Big Yards-Coaching/Goods • measures to prevent accident during shunting movement • ODC movement, Marshalling • Securing of Vehicles /Engine, Escaping of Vehicles– Stabling at Station, Train Stalled in Mid section • Ghat rules – Slip siding and catch siding |

| | |
|-----------|---|
| TP-8/2.14 | Duties of Cabin Master in case of - <ul style="list-style-type: none"> • person run over cases, Cattle run over cases • Obstruction in block section • Patrolman delayed in block section, Train delayed in block section, Rail fracture, Loco pilot reporting any abnormal condition in block section, OHE |
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| I/3117998/2025 | <p>failure, Traffic, Engineering, Power Block</p> <ul style="list-style-type: none"> • Track machine, Passing of train without tail lamp / tail board • In case of serious accident, Signal passing at danger by Loco Pilot • Bursting of points, Fire on train • Breach of block rule, Sabotage and train wrecking • Threat perception, Working of Tower wagon, Trolley, Motor trolley, lorry. • Safety equipments, boards, passenger amenities available at station • Exchanging of hand signals with train crew • Responsibility of Cabin Master regarding punctuality • use of crank handle, Overhauling, cable maggering, NI work and precautions, Cross over testing, crank handle testing, use of cross over |
| TP-8/2.15 | Working of Level Crossings – Types of LC, Classification– Working at Manned Non-Interlocked LC-Failure of LC, Abnormal working at LC. |
| TP-8/2.16 | Working of Trains in Electrified Sections - Parts of OHE-Power Supply arrangements, Traction Power Control Organisation - Power Blocks – Kinds – Registers, SCADA |
| TP-8/2.17 | Automatic Block System – S/L & D/L - <ul style="list-style-type: none"> • Kinds of Signals • Salient Features – Sequence of Aspects of Automatic Signals, Establishing Direction of Traffic, etc • Passing Signals at 'On' • Various Authorities to Proceed • Abnormal Occasions – Panel Failure, Prolonged failure of Signals, Failure of Both Signal & Communication, Sending Relief Engine, Single line working on D/L, Movement against DOT, etc • Shunting in Automatic Territory • Competency Certificate • Modified Semi Automatic Stop Signal Working - Working during foggy weather and in abnormal situations. |
| TP-8/2.18 | Practice of Forms in Unusual working |
| TP-8/2.19 | Works of Short & Long duration - Protection at site, Engineering Indicators, Cause ways |
| TP-8/2.20 | Patrolling of lines – Kinds of Patrolling, SM's responsibilities |
| TP-8/2.21 | Line Block-Requisition, Imposition, Extension, Removal |
| TP-8/2.22 | Introduction to Trolley, Lorry, Motor Trolley, etc – Competency Certificate – Issue & Renewal, etc |
| TP-8/2.23 | Working of Trolley, Lorry, OHE Ladder Trolley, Cycle Trolley |
| TP-8/2.24 | Working of Motor Trolley, |
| TP-8/2.25 | Caution Order – Preparation, Issue & Circumstances |
| BLOCK WORKING RULES | |
| TP-8/2.26 | System of Working – Definition, Different Systems – Introduction |
| TP-8/2.27 | Order of Precedence of Trains & Control Working |
| TP-8/2.28 | Means of Communication |

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|-----------|--|
| TP-8/2.29 | Essentials of Absolute Block System |
| TP-8/2.30 | Documents connected with Block Working – Block Competency Certificate, Train Signal Register, PN Book |
| TP-8/2.31 | Block Instrument/Track Circuit/Axle Counter & BPAC – UFSBI (single and double line) Objective of provision |
| TP-8/2.32 | Bell Code Signals-Types, significance, follow up action |
| TP-8/2.33 | Various Authorities to Proceed – S/L & D/L |
| TP-8/2.34 | Block Instruments: <ul style="list-style-type: none"> • Single line and Double line • Parts & Functions • Precautions before granting/asking Line Clear, before closing the Block Section, Testing before Taking over charge • Failure Occasions – Restoration by S&T Officials, SMs themselves, DSTE/ASTE • Hands on Training – Normal working, Normal Cancellation, Push back Cancellation & Testing |
| TP-8/2.35 | Total Interruption of Communication (ACF) on Single & Double line. |
| TP-8/2.36 | Temporary Single line working on Double Line (TSL) |
| TP-8/2.37 | Train dividing Train parting |
| TP-8/2.38 | Authority to Proceed without Line Clear-Issue & circumstances, Sending assisting engine in obstructed Block section |
| TP-8/2.39 | Block Failure – Follow Up Action |
| TP-8/2.40 | Filling up of Operating Forms – Hands on Training |
| TP-8/2.41 | Hand on Practice in Model room |
| TP-8/2.42 | Simulator Training |

| TP-8/5 | TRANSPORTATION -4 |
|----------|--|
| TP-8/5.1 | S&T:
Specific duties under G&S.R, Specific duties under Block Working Rules <ul style="list-style-type: none"> • Relay Room Double Key Lock Register • Block Instrument Double Key Lock Register • Signal, Block, Failure & Inspection Register • S&T (NM), S&T (T/351) • Failure Advice & Joint Restoration Memo • Route Release Memo, etc |
| | Panel- Resetting of Route/BPAC, Data Logger-Use in failure restoration & Maintenance. |
| TP-8/5.2 | Electrical:
Specific duties under G&S.R
Duties of OHE Staff – Co-ordination with other Departments,
Basics about AC Traction, Elementary Knowledge of OHE
Types of Power Block-Precautions & Procedures, Working of Tower Wagon
HE Sectioning Diagram, FP, SSP, SP, Sector, Sub-Sector, Elementary and Neutral sections, Reporting of abnormalities and action to be taken.
Operation of Isolator Switches, Authorized Persons
Types of Power Block, Precautions & Procedures, Power Block Registers |

I/3117998/2025 TP-8/5.3

Mechanical (C&W):

Rolling Stock – Features & Specifications how it rolls on Track – Track Bound, LHB and Hybrid coach,
 Examinations - kinds, Things to be observed and Specifications,
 Brake System – Working of Air Brake System – Hand Brake in Wagons, GDR. Check, Resetting of alarm chain apparatus,
 Abnormal occasions – Flat Tyre, Brake Binding, Hot Axle, open door etc
 Trouble Shooting of LHB coach .

| TP-8/6 | SAFETY MANAGEMENT |
|----------|--|
| TP-8/6.1 | Accidents – Definitions, Classification, Consequential & other Train accidents <ul style="list-style-type: none"> • Accident Management- Sounding of Hooter, Movement of Relief trains • Chain of command during accident, Running of ART/SPART, ARME/SPARME, Break down Special, Target Time, • Protection of line, Preservation of clues at the site • Duties of Cabin Master in case of Serious Accidents • Slack, Rough running reported by LPs / Guards • Fire on Trains, Hot Axle, Train Parting / Dividing |
| TP-8/6.2 | Disaster Management – Introduction, Various Organizations, Developments on DM at National level, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance.
Working of trains during disasters (Floods, Cyclones, Earthquakes etc) |
| TP-8/6.3 | First Aid – (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs.
Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half day for Hands on Practice. |
| TP-8/6.4 | Fire Fighting – Theory & Demonstration, Civil defence.
Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire.
Half day for Hands on Practice. |

| TP-8/7 | ESTABLISHMENT |
|----------|--|
| TP-8/7.1 | Brief idea about Leave, Pass, Conduct Rule etc. |
| TP-8/7.2 | HWPR - Duty Roster, Description and classification, statutory provisions, periodical rest, long-on, short-off, split shift, penalty for violation of HWPR, job analysis. |
| TP-8/7.3 | D& AR – Brief Introduction-Standard Forms, Provision under Discipline and Appeal Rule 1968. |
| TP-8/7.4 | PNM, JCM, PREM, RTI, SBF, Confidential Report (APAR). |

| TP-8/8 | INFORMATION TECHNOLOGY |
|----------|--|
| TP-8/8.1 | Computerization in Indian Railways |
| TP-8/8.2 | Basic Knowledge of Computers, Means of Social Media and their uses |
| TP-8/8.3 | FOIS, RMS,TMS, COIS, ICMS, PAM, CMS, NTES, WILD etc- an overview |

| TP-8/9 | ETHICAL LEADERSHIP & SOFT SKILL |
|----------|---|
| TP-8/9.1 | Ethics – Meaning, Role, Need, Value and Importance in public life. |
| TP-8/9.2 | Leadership – Meaning, Role, Need, Value and Importance, Team building, Crowded/Mob Management. |
| TP-8/9.3 | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience, Brain Storming, Perception. Forgiveness, Case studies/ inspirational videos. |
| TP-8/9.4 | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life. |
| TP-8/9.5 | Customer care - Public perception, public relations, courtesy, Customer service its importance and provision. |
| TP-8/9.6 | Soft Skills – Meaning, Requirements and its importance in public life. |
| TP-8/9.7 | Yoga, PT, Meditation and Shramdan. |
| TP-8/9.8 | Sports |

| TP-8/10 | FIELD TRAINING |
|-----------|--|
| TP-8/10.1 | Study Tour during the Training Course at ZRTI (4 days) |
| | |

| TP-8/11 | EXAMINATION | Day | Hours |
|-----------|---|-----|-------|
| TP-8/11.1 | Paper – 1 (Transportation) Max Marks: 100
[Obj: 40 Marks; Descriptive: 60 Marks] | 1 | 3 |
| TP-8/11.2 | Practical Test : (Operation of various Block Instruments, Filling up of Operating Forms, Working in Panel Hand Cranking of Points, Clamping & Padlocking). Max Marks: 100 | 1 | -- |

Training Module for SS/SM/TI/YM/Cabin Master/Switch Man – Refresher

| | |
|-------------------|--|
| Department | Transportation |
| Course No. | TR-1 |
| Category | Station Superintendent/Station Master/ Traffic Inspector/
Yard Master/Movement Inspector/Cabin Master/Switchman |
| Stage | Refresher course |
| Duration | 12 working Days = 72 Hours (+3 days Safety Camp) |

| Module No. | Description | Hours | Days |
|-------------------|--|--------------|-------------|
| TR-1/1 | Transportation -1 (Lower Transportation) | 30 | 05 |
| TR-1/2 | Transportation -2 (Commercial) | 06 | 01 |
| TR-1/3 | Transportation -4 (Other Department) | 06 | 01 |
| TR-1/4 | Establishment and Stores | 06 | 01 |
| TR-1/5 | Safety Management | 06 | 01 |
| TR-1/6 | Information Technology | 06 | 01 |
| TR-1/7 | Ethical Leadership & Stress Management | 06 | 01 |
| TR-1/8 | Examination | 06 | 01 |
| | Total | 72 | 12 |

| TR-1/1 | | TRANSPORTATION - 1 |
|-----------|--|---|
| TR-1/1.1 | | Admission facilities |
| TR-1/1.2 | | Role and importance of Station Master in Railway Transportation, Discussion on latest Railway Board/HQ Circulars, JPO, Safety Circulars, Discussion on latest Amendment Slips of G&SR, Accident Manual, Operating manual and Block Working Manual, Knowledge of recent new technologies, Important definitions. |
| TR-1/1.3 | | Brief idea of signals, placement and their indications. Revised Interlocking standard. |
| TR-1/1.4 | | Action and working of train during failure of point/ signal, procedure and precaution for Disconnection/ Reconnection of points, signal & other S&T gear. Procedure of opening Relay Room. |
| TR-1/1.5 | | Various operating forms and authorities, cases and precautions for their issue. |
| TR-1/1.6 | | Essential of Absolute and Automatic Block System, Condition for granting line clear and taking of signals, Announcing and Starting of the train, Lobby working, Shunting method, stages and responsibilities. |
| TR-1/1.7 | | Head light, Marker light, flasher light and their failures, Speed of trains, engine pushing, precaution of imposing and removal of speed restriction, preparation of Caution Order, Crane working, Material train working signal exchange with running staff, Working of Long haul goods train.
Duties of SM in regard to Tail Lamp/Tail Board, Whistle code, Hot axle/Hanging part in train, running of train without Brake Van/Guard, Blocking of running line and reversal of points on single and double line, Fouling mark jam. Pushing back of trains. |
| TR-1/1.8 | | Reception of train on obstructed line/non-signaled line, dispatch of train from non-signaled line or from a line having common starter signal. |
| TR-1/1.9 | | Stabling of load, Securing of load, Block Rake of passenger and goods train, Marshalling of Dead Engine, Inspection carriage, ODC, damage vehicle, explosive & inflammable wagons. |
| TR-1/1.10 | | Use of Bell codes, Normal and Abnormal working on various Block Instrument whichever is concerning. |
| TR-1/1.11 | | Brief idea and duties of Station Master in connection with Station Working Rules, Traffic Working Order, Working Time Table. |
| TR-1/1.12 | | Working of Level Crossing Gate, Types of inspection, periodicity and importance of Inspection. |
| TR-1/1.13 | | Protection of work site, Track Maintenance/working through machines (TTM, RRV, PQRS, TRT), Trolleys, Motor Trolley, Material Lorry, Rail Dolley etc. Line Block, Integrated Block (Combined Block), Patrolling of Line. |
| TR-1/1.14 | | Power Block, Working of trains during fault in OHE, Working of Tower Wagon. |
| TR-1/1.15 | | Crowd & Mob conditions at station, Chain pulling, overshooting of stop mark and platform, roof travelers, trespasser, run over Engineering Scale Plan(ESP), Signal & Interlocking Plan(SIP), Detailed Project Report (DPR), etc. |
| TR-1/1.16 | | Planning, imposition, execution & precaution. |
| TR-1/1.17 | | Working of Panel, Route Relay Interlocking, Solid State Interlocking, Electronic Interlocking, SSDAC, Data logger, working of trains during Panel failure – i.e. panel blank-off, Panel Lock, Crank handle operation. Specification of each with abnormal working & emergency operation. Training on Simulator, <ul style="list-style-type: none"> • Introduction, Kavach and its Sub Systems: Salient features of Kavach , Components of Kavach, Kavach arrangements in station at a glance, Loco Kavach at a glance, Radio Frequency Identification (RFID) Tags, Working Principle • Station Master Operation Cum Indication Panel (SM-OCIP): Introduction to SM-OCIP, Provisions in Station Master Operation Cum Indication Panel ,Manual SOS generation/ Cancellation, SOS acknowledgement by SM ,Reporting of Kavach Failures, Variations in SMOCIP in different makes, • Operational Modes of Onboard Kavach for Version 4.0: Driver Machine Interface (DMI) at a glance, Different Types of Operational Modes of Onboard Kavach for Version 4.0, Mode Transitions in Kavach Ver 4.0, Features available at different Operational Modes in Kavach. |

| TR-1/2 | TRANSPORTATION -2 |
|----------|---|
| TR-1/2.1 | General rules for passenger and ticketing i.e. Break journey rules and rules for commencement of journey, Brief idea of UTS cum PRS and its function. Idea about various types of passenger trains. |
| TR-1/2.2 | General rules for cancellation of tickets and rules of refund in normal and abnormal conditions. |
| TR-1/2.3 | Registration, Indent and allotment of wagon, Cash Imprest and its use, Withdrawal from station earning. |
| TR-1/2.4 | YTSK, STBA, JTBS etc., Block Booking, Duplicate Ticket, Ticket left behind, Backing up of ticket, Complaint and its disposal, brief idea of coach booking. |
| TR-1/2.5 | Important sections of Railway Act |
| TR-1/2.6 | Contract Management, Station Cleanliness Management, |
| TR-1/2.7 | Passenger amenities and category of station. |
| TR-1/2.8 | Rules related to acceptance, booking and delivery of goods, parcel and luggage. Rebooking & diversion, Demurrage, wharfage and stacking. |
| TR-1/2.9 | Discussion on latest circulars and policies. |

| TR-1/3 | TRANSPORTATION -4 |
|--------------------|--|
| MECHANICAL | |
| TR-1/3.1 | Working of single and double pipe Air Brake System, BPC and its validity, GDR, Percentage of brake power required in trains. LHB coach and its trouble shooting.
Alarm chain pulling – resetting/isolating, causes of brake binding and its releasing. Working of train having flat Tyre, Hot Axle. |
| ELECTRICAL | |
| TR-1/3.2 | Brief idea of latest train lighting system and traction supply system (Electric), Power Block & Traffic Block, precaution during power block/Tfc. Block. Fault in OHE, Operation of Isolator switch in local power block. |
| ENGINEERING | |
| TR-1/3.3 | Engineering Block, procedure, precaution during train working, Distressing work, duration of block in various conditions. |
| TR-1/3.4 | Types of Track Machines, difference between them, productivity per hour, their working and stabling. |

| TR-1/4 | ESTABLISHMENT & STORES |
|----------------------|--|
| Establishment | |
| TR-1/4.1 | Leave, Pass, various allowances, HWPR, Conduct Rule, D&AR.
Briefing about various Laws related to day to day working.
Job analysis, Work Study |
| Store | |
| TR-1/4.2 | Indenting procedure, e-procurement system, T&P, inventory control, returned stores. Station Imprest, Stock verification & Stock sheet. |

| TR-1/5 SAFETY MANAGEMENT | |
|-------------------------------|---|
| TR-1/5.1 | <p>Accidents – Definitions, Threshold Value, Classification, Reporting, Assistance Protocol.</p> <p>Accident case studies, Safety in train operation</p> <ul style="list-style-type: none"> • Consequential & other Train accidents • Indicative Accidents – Class F, G & H • Accident Management- Sounding of Hooter, Movement of Relief trains • Chain of command during accident, Running of ART/SPART, ARME/SPARME, Break down Special, Target Time, • Protection of line, Preservation of clues at the site • Various Accident Forms, • Duties of SM, Guard, LP, Controller and Supervisors of various department in case of Serious Accidents • Person falling out / knocked down by Trains – Duties of Guards & SM • Slack, Rough running reported by LPs / Guards • Fire on Trains, Hot Axle, Train Parting / Dividing • Prima-facie cause of accident, Reading and measurement at accident site by Supervisors and preparation of Joint Note • Ex-gratia payments • Causes of accidents and remedial measures • Accident enquiries, Levels of Enquiry • Sharing of experiences of Station Masters on the above subject |
| TR-1/5.2 | <p>Disaster Management – Introduction, Various Organizations, Developments on DM at National level, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance.</p> <p>Working of trains during disasters (Floods, Cyclones, Earthquakes etc)</p> |
| TR-1/5.3 | <p>Guest lecture - by Divisional Officers / Supervisory Officials and Safety Counselors on “Accident Management”</p> |
| TR-1/5.4 | <p>First Aid – (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs.</p> <p>Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half day for Hands on Practice.</p> |
| TR-1/5.5 | <p>Fire Fighting – Theory & Demonstration, Civil defence.</p> <p>Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire.</p> <p>Half day for Hands on Practice.</p> |
| TR-1/6 INFORMATION TECHNOLOGY | |
| TR-1/6.1 | Computerization in Indian Railways |
| TR-1/6.2 | Basic Knowledge of Computers(Word, Excel, Power Point), Means of Social Media and their uses |
| TR-1/6.3 | FOIS, RMS,TMS, COIS, ICMS, PAM, CMS, NTES, WILD, SIMRAN, SATSANG etc- an overview. Kavach Related FAQ |
| TR-1/6.4 | Hands on Practice. |

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| TR-1/7 | ETHICAL LEADERSHIP & SOFT SKILL |
|----------|---|
| TR-1/7.1 | Ethics – Meaning, Role, Need, Value and Importance in public life. |
| TR-1/7.2 | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life. |
| TR-1/7.3 | Soft Skills – Meaning, Requirements and its importance in public life. |
| TR-1/7.4 | Yoga, PT, Meditation and Shramdan. |
| TR-1/7.5 | Sports |

| TR-1/8 | EXAMINATION | Day | Hours |
|----------|---|-----|-------|
| TR-1/8.1 | Paper – 1 (Transportation) = Max Marks: 100
Model Room | 1 | 3 |

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## Training Module for Guard -Refresher

|                   |                                                          |
|-------------------|----------------------------------------------------------|
| <b>Department</b> | <b>Transportation</b>                                    |
| Course No.        | <b>TR- 2</b>                                             |
| Category          | <b>Guard</b>                                             |
| Stage             | <b>Refresher course</b>                                  |
| Duration          | <b>10 working Days = 60 Hours (+ 3 Days Safety Camp)</b> |

| <b>Module No.</b> | <b>Description</b>                       | <b>Hours</b> | <b>Days</b> |
|-------------------|------------------------------------------|--------------|-------------|
| TR - 2/1          | Transportation -1 (Lower Transportation) | 24           | 04          |
| TR - 2/2          | Transportation -2 (Commercial)           | 06           | 01          |
| TR - 2/3          | Transportation -4 (Other Department)     | 06           | 01          |
| TR - 2/4          | Safety Managements                       | 06           | 01          |
| TR - 2/5          | Ethical Leadership & Stress Management   | 06           | 01          |
| TR-2/6            | Information Technology                   | 06           | 01          |
| TR - 2/7          | Examination                              | 06           | 01          |
|                   | <b>Total</b>                             | <b>60</b>    | <b>10</b>   |

| TR - 2/1    | TRANSPORTATION -1                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TR - 2/1.1  | Admission formalities                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| TR - 2/1.2  | Role and importance of Guard in Railway Transportation, Important definitions, Learning Road, Sign-on and Sign-off, 09 Hours Rule, Rest at HQ/out of HQ.                                                                                                                                                                                                                                                                                                                          |
| TR - 2/1.3  | Various types of authorities, their use and Precaution.                                                                                                                                                                                                                                                                                                                                                                                                                           |
| TR - 2/1.4  | Brief description, Use of signals during train working, Importance of point, non-interlocking point, its locking and reversal of point on single line and double line station.                                                                                                                                                                                                                                                                                                    |
| TR - 2/1.5  | Tail Lamp/Board, Side/Flasher/ Head Light, Working of EMU/DMU/MEMU trains, speed of trains in different conditions.                                                                                                                                                                                                                                                                                                                                                               |
| TR - 2/1.6  | Signal exchanging between LP, Guard and SM, Whistle code, Precaution during crossing of trains at station, and passing train from adjacent line in block section,                                                                                                                                                                                                                                                                                                                 |
| TR - 2/1.7  | Stabling and securing of vehicle at station and in outlying siding, Checking safe condition of train before starting, procedure to start a Passenger/Goods train.                                                                                                                                                                                                                                                                                                                 |
| TR - 2/1.8  | WTT, punctuality, Working of ODC, material train, python rake, Long Haul Goods Train, double stack container, special/VIP train.                                                                                                                                                                                                                                                                                                                                                  |
| TR - 2/1.9  | Shunting method, stage and responsibility, Block rake of passenger and goods trains, Marshalling of Dead Engine, Inspection Carriage, Crane, Damage Vehicle, and Special Stock. Precaution during running of special type stock.                                                                                                                                                                                                                                                  |
| TR - 2/1.10 | Essential and salient features of Absolute, Automatic, One Train and Following Train system, working of trains in Ghat section.                                                                                                                                                                                                                                                                                                                                                   |
| TR - 2/1.11 | Discussion on latest Railway Board/HQ Circulars, JPO, Safety Circulars and latest Amendment Slips of G&SR, Accident Manual and Operating manual, Knowledge of recent new technology.                                                                                                                                                                                                                                                                                              |
| TR - 2/1.12 | Reception of train on obstructed line/non-signalled line, Despatch of train from non-signalled line or from a line having common starter signal.                                                                                                                                                                                                                                                                                                                                  |
| TR - 2/1.13 | Working of trains during failure, Obstruction, Sending of Relief Engine/Train, TSL, TFC, Train Parting, Abnormal working during Prolonged failure of Automatic signal, abnormal condition, protection of train, fire in train, Train overdue, Train parting, OHE faulty etc.                                                                                                                                                                                                      |
| TR - 2/1.14 | Running of trains without brake van, chain pulling, overshooting of stop mark and platform.                                                                                                                                                                                                                                                                                                                                                                                       |
| TR - 2/1.15 | Duties of Guard in following conditions – <ul style="list-style-type: none"> <li>• Gate Stop signal fail</li> <li>• Automatic Stop signal in on position</li> <li>• IBS in on position</li> <li>• Fouling mark jam</li> <li>• Thick &amp; Foggy weather</li> <li>• Pushing back of train</li> <li>• First Stop signal in on position</li> <li>• Roof Travelling, Over crowding</li> <li>• Alarm Chain pulling</li> <li>• Protection of train.</li> <li>• Track defects</li> </ul> |

| TR - 2/2   |  | TRANSPORTATION - 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TR - 2/2.1 |  | Halt Booking, Issue of Guard's Certificate, Break journey and commencement of journey rule, Rules for booking of luggage and parcel, PLM, Sealing, Riveting and locking.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| TR - 2/2.2 |  | Important sections of Railway Act 1989 (58, 59 to 67, 123 to 129, 141, 144, 156, 167), Carriage of dangerous/explosive, carriage of animal in brake van, working of TC Safe.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| TR - 2/2.3 |  | Duties of Guard in case of running train theft, damage & broken seal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| TR-2/3     |  | TRANSPORTATION – 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| MECHANICAL |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TR-2/3.1   |  | Working of single and double pipe Air Brake System, Continuity test of Passenger/Goods train, Brief idea of new rolling stock.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| TR-2/3.2   |  | Specific features of new locomotives, hauling capacity, LHB coaches, new wagons etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| TR-2/3.3   |  | Primary and Secondary Examination of train, BPC and its validity, GDR, Percentage of brake power required in trains.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| TR-2/3.4   |  | Alarm chain pulling – resetting/isolating, causes of brake binding and its releasing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| TR-2/3.5   |  | Working of train having flat Tyre & Hot Axle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| ELECTRICAL |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TR-2/3.6   |  | Brief idea of OHE and precaution during fault and accident, Brief idea of latest train lighting system, duties of Guard in respect of train lighting, ETL Box.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| TR-2/3.7   |  | Use of Field Telephone.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| TR-2/4     |  | SAFETY MANAGEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TR-2/4.1   |  | <p><b>Accidents</b> – Definitions, Threshold Value, Classification, Reporting, Assistance Protocol.</p> <ul style="list-style-type: none"> <li>• Accident case studies, Safety in train operation</li> <li>• Consequential &amp; other Train accidents</li> <li>• Indicative Accidents – Class F, G &amp; H</li> <li>• Sounding of Hooter, Movement of Relief trains</li> <li>• Chain of command during accident, Running of ART/SPART, ARME/SPARME, Break down Special, Target Time,</li> <li>• Protection of line, Preservation of clues at the site</li> <li>• Various Accident Forms,</li> <li>• Duties of SM, Guard, LP, Controller and Supervisors of various department in case of Serious Accidents</li> <li>• Person falling out / knocked down by Trains – Duties of Guards &amp; SM</li> <li>• Slack, Rough running reported by LPs / Guards</li> <li>• Fire on Trains, Hot Axle, Train Parting / Dividing</li> <li>• Prima-facie cause of accident, Reading and measurement at accident site by Supervisors and preparation of Joint Note</li> <li>• Ex-gratia payments</li> <li>• Causes of accidents and remedial measures</li> <li>• Accident enquiries, Levels of Enquiry</li> <li>• Sharing of personal experiences</li> <li>• <b>Introduction, Kavach and its Sub Systems: Salient features of Kavach , Components of Kavach, Kavach arrangements in station at a glance, Loco Kavach at a glance, Radio Frequency Identification (RFID) Tags, Working Principle.</b></li> <li>• <b>Operational Modes of Onboard Kavach for Version 4.0: Driver Machine Interface (DMI) at a glance, Different Types of Operational Modes of Onboard Kavach for Version 4.0, Mode Transitions in Kavach Ver 4.0, Features available at different Operational Modes in Kavach.</b></li> </ul> |

|                  |                                                                                                                                                                                                                                                                                                                                                               |            |              |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------|
| TR-2/4.2         | <b>Disaster Management</b> – Introduction, Various Organizations, Developments on DM at National level, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance. Working of trains during disasters (Floods, Cyclones, Earthquakes etc)                                           |            |              |
| TR-2/4.3         | <b>Guest lecture</b> - by Divisional Officers / Supervisory Officials and Safety Counsellors on “Accident Management”                                                                                                                                                                                                                                         |            |              |
| TR-2/4.4         | <b>First Aid</b> – (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs. Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half Day Hands on Practice. |            |              |
| TR-2/4.5         | <b>Fire Fighting</b> – Theory & Demonstration, Civil defence. Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire. Half Day Hands on Practice.                                                                                                               |            |              |
| <b>TR-2/5</b>    | <b>ETHICAL LEADERSHIP &amp; SOFT SKILL</b>                                                                                                                                                                                                                                                                                                                    |            |              |
| TR-2/5.1         | Ethics – Meaning, Role, Need, Value and Importance in public life. Crowd/Mob Management.                                                                                                                                                                                                                                                                      |            |              |
| TR-2/5.2         | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life.                                                                                                                                                                                                                                                         |            |              |
| TR-2/5.3         | Customer care - Public perception, public relations, courtesy, Customer service its importance and provision.                                                                                                                                                                                                                                                 |            |              |
| TR-2/5.4         | Soft Skills – Meaning, Requirements and its importance in public life.                                                                                                                                                                                                                                                                                        |            |              |
| TR-2/5.5         | Yoga, PT, Meditation and Shramdan.                                                                                                                                                                                                                                                                                                                            |            |              |
| TR-2/5.6         | Sports                                                                                                                                                                                                                                                                                                                                                        |            |              |
| <b>TI/TP-2/6</b> | <b>INFORMATION TECHNOLOGY</b>                                                                                                                                                                                                                                                                                                                                 |            |              |
| TI/TP-2/6.1      | Computerization in Indian Railways                                                                                                                                                                                                                                                                                                                            |            |              |
| TI/TP-2/6.2      | Basic Knowledge of Computers (Word, Excel, Power Point presentation), Means of Social Media and their uses                                                                                                                                                                                                                                                    |            |              |
| TI/TP-2/6.3      | FOIS, RMS, TMS, COA, COIS, ICMS, PAM, NTES, WILD, SIMRAN, SATSANG etc- an overview, <a href="#">Kavach Related FAQ</a>                                                                                                                                                                                                                                        |            |              |
| TI/TP-2/6.4      | CMS training                                                                                                                                                                                                                                                                                                                                                  |            |              |
| TI/TP-2/6.5      | Hand on Practice.                                                                                                                                                                                                                                                                                                                                             |            |              |
| <b>TR-2/7</b>    | <b>EXAMINATION</b>                                                                                                                                                                                                                                                                                                                                            | <b>Day</b> | <b>Hours</b> |
| TR-2/7.1         | Paper – 1 (Transportation) = Max Marks: 100<br>Model Room                                                                                                                                                                                                                                                                                                     | 1          | 3            |



## Training Module for Train Controller Refresher

|                   |                                                           |
|-------------------|-----------------------------------------------------------|
| <b>Department</b> | <b>Transportation</b>                                     |
| <b>Course No.</b> | <b>TR-3</b>                                               |
| <b>Category</b>   | <b>Train Controller</b>                                   |
| <b>Stage</b>      | <b>Refresher</b>                                          |
| <b>Duration</b>   | <b>06 Working Days = 36 Hours (Excluding Safety Camp)</b> |

| <b>Module No.</b> | <b>Description</b>                        | <b>Hours</b> | <b>Days</b> |
|-------------------|-------------------------------------------|--------------|-------------|
| TR-3/1            | Transportation -1 (Lower Transportation)  | 12           | 02          |
| TR-3/2            | Transportation -2 (Commercial)            | 03           | 0½          |
| TR-3/3            | Transportation -3 (Higher Transportation) | 06           | 01          |
| TR-3/4            | Safety Management                         | 06           | 01          |
| TR-3/5            | Information Technology                    | 03           | 0½          |
| TR-3/6            | Ethical Leadership & Soft Skill           | 03           | 0½          |
| TR-3/7            | Examination                               | 03           | 0½          |
|                   | <b>Total</b>                              | <b>36</b>    | <b>06</b>   |
|                   |                                           |              |             |

| TR-3/1    | TRANSPORTATION -1                                                                                                                                                                                                                                                                                                                      |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TR-3/1.1  | Role and importance of Train Controller in Railway Transportation, Important definitions, brief idea of signals, placement and their indications. Revised Interlocking standard                                                                                                                                                        |
| TR-3/1.2  | Various operating forms, authorities and their uses.                                                                                                                                                                                                                                                                                   |
| TR-3/1.3  | Essentials of system of working ( Absolute Block System, Automatic Block System & One Train only system), Condition for granting line clear and taking of signals, Starting of the train, Simultaneous Reception of Trains.                                                                                                            |
| TR-3/1.4  | Shunting method, stages and responsibilities on Absolute Block System, Shunting in Automatic section.                                                                                                                                                                                                                                  |
| TR-3/1.5  | Head light, Marker light, flasher light and their failures, Speed of trains, engine pushing, Types of Speed Restrictions, imposing and removal of speed restriction, exchanging of signal by staff during train working, Whistle code.                                                                                                 |
| TR-3/1.6  | General Train working, with special attention on ODC, Crane working, Material train working, Long haul goods train, Container train, Special/VIP train, EMU/DMU/MEMU, Lobby working.                                                                                                                                                   |
| TR-3/1.7  | Working of trains during abnormal conditions i.e. TFC, TSL, Train parting, delayed train, engine failure etc.                                                                                                                                                                                                                          |
| TR-3/1.8  | Hot axle/Hanging part in train, running of train without TL/TB or without Brake Van/Guard, reversal of points on single and double line, Infringement of Fouling mark.                                                                                                                                                                 |
| TR-3/1.9  | Stabling of load on running line, Securing of load, Block rake of passenger and goods trains, marshalling of special stock, Dead Engine, Inspection carriage, Attaching of vehicles outside brake van.                                                                                                                                 |
| TR-3/1.10 | Duties of Train Controller and brief idea about master chart, punctuality, Station Working Rules, Traffic Working Order, Working Time Table. Load Table, Wagon Turn Round, Section Capacity, Through put, Time Tabling, General precedence order of trains, Engineering Scale Plan, Signal Interlocking Plan, Detailed Project Report. |
| TR-3/1.11 | Types and working of Level Crossing Gate.                                                                                                                                                                                                                                                                                              |
| TR-3/1.12 | Track Maintenance/working through machines (TM, PQRS, TRT, RRV), Patrolling of Line, Trolleys, Motor Trolley, Material Lorry, Rail Dolley, Engineering Line Block, Integrated Block.                                                                                                                                                   |
| TR-3/1.13 | Discussion on latest Railway Board/HQ Circulars, JPO, Safety Circulars, Discussion on latest Amendment Slips of G&SR, Accident Manual, Operating manual and Block Working Manual, Knowledge of recent new technologies.                                                                                                                |

| TR-3/2   | TRANSPORTATION - 2                                                                                                                                                                                           |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TR-3/2.1 | Registration, Indent and allotment of wagon, WRF, Priority schedule. Freight Incentive scheme.<br>Weightment and Punitive charges, Free time for loading/unloading, Demurrage & Wharfage, stacking of goods. |
| TR-3/2.2 | Rules regarding rebooking and diversion of traffic, short off destination, change of commodity and change of destination.                                                                                    |

| TR-3/3             | TRANSPORTATION - 3                                                                                                                                                                                                  |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MECHANICAL</b>  |                                                                                                                                                                                                                     |
| TR-3/3.1           | Braking system on Indian Railways, Working of single and double pipe Air Brake System, Primary and Secondary Maintenance, various kinds of BPC and its validity, GDR, Percentage of brake power required in trains. |
| TR-3/3.2           | Symptoms of Hot axle, Alarm chain pulling – resetting/isolating, causes of brake binding and its releasing. Working of train having flat Tyre.                                                                      |
| <b>ELECTRICAL</b>  |                                                                                                                                                                                                                     |
| TR-3/3.3           | Brief idea of latest train lighting system and traction supply system (Electric), Power Block & Traffic Block.                                                                                                      |
| TR-3/3.4           | OHE Failure and action to be taken by Train Controller, precautions during abnormal working in Electrified section. Permit to work in OHE.                                                                          |
| <b>ENGINEERING</b> |                                                                                                                                                                                                                     |
| TR-3/3.5           | Engineering Block, procedure, precaution during train working, Distressing work, duration of block in various conditions.                                                                                           |
| TR-3/3.6           | Types of Track Machine, difference between them, productivity per hour, their working and stabling.                                                                                                                 |

| TR- 3/4  | Safety Management                                                                                                                                                                                                                                                                                                      |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TR-3/4.1 | <b>Accident -</b><br>Various important definition, classification of accident, Running of ART/ARME, Target time of ART/ARME, Hooters and Mock Drill, reporting of accidents.<br>Duties of Train Controller and CTNLS at the time of accident, causes and remedy of major accidents.                                    |
| TR-3/4.2 | <b>Disaster Management</b> – Introduction, Various Organizations, Developments on DM at National level, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance.<br>Working of trains during disasters (Floods, Cyclones, Earthquakes etc) |
| TR-3/4.3 | <b>Fire Fighting</b> – Theory & Demonstration, Civil defence.<br>Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire.<br>Half day for Hands on Practice.                                                              |

| <b>TR-3/5 INFORMATION TECHNOLOGY IN TRAIN OPERATION</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TR-3/5.1                                                | Fundamental of FOIS, ICMS,CMS, RMS, TMS, WILD (wheel impact load detector), SIMRAN (software impact rail network), SATSANG (software aided train scheduling) and advantage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| TR-3/5.2                                                | <p>Applications of COA, use and reports generated through COA and ICMS, FOIS-COA integration.</p> <ul style="list-style-type: none"> <li>• Introduction, Kavach and its Sub Systems: Salient features of Kavach , Components of Kavach, Kavach arrangements in station at a glance, Loco Kavach at a glance, Radio Frequency Identification (RFID) Tags, Working Principle</li> <li>• Operational Modes of Onboard Kavach for Version 4.0:Driver Machine Interface (DMI) at a glance, Different Types of Operational Modes of Onboard Kavach for Version 4.0, Mode Transitions in Kavach Ver 4.0, Features available at different Operational Modes in Kavach.</li> <li>• Kavach Related FAQ</li> </ul> |
| <b>TI/TP-3/6 ETHICAL LEADERSHIP &amp; SOFT SKILL</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| TI/TP-3/6.1                                             | Ethics – Meaning, Role, Need, Value and Importance in public life.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| TI/TP-3/6.2                                             | Leadership – Meaning, Role, Need, Value and Importance, Team building, Crowded/Mob Management.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| TI/TP-3/6.3                                             | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience, Brain Storming, Perception. Forgiveness, Case studies/ inspirational videos.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| TI/TP-3/6.4                                             | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| TI/TP-3/6.6                                             | Soft Skills – Meaning, Requirements and its importance in public life.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| TI/TP-3/6.7                                             | Yoga & Meditation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| <b>TR-2/7 EXAMINATION</b> |                                                                         | <b>Day</b> | <b>Hours</b> |
|---------------------------|-------------------------------------------------------------------------|------------|--------------|
| TR-2/7.1                  | <b>Paper – 1 (Transportation) = Max Marks: 100</b><br><b>Model Room</b> | 1          | 3            |

### Training Module for Trains Clerk Refresher

|                   |                                   |
|-------------------|-----------------------------------|
| <b>Department</b> | <b>Transportation</b>             |
| <b>Course No.</b> | <b>TR-4</b>                       |
| <b>Category</b>   | <b>Trains clerk</b>               |
| <b>Stage</b>      | <b>Refresher course</b>           |
| <b>Duration</b>   | <b>06 working Days = 36 Hours</b> |

| <b>Module No.</b> | <b>Description</b>                       | <b>Hours</b> | <b>Days</b> |
|-------------------|------------------------------------------|--------------|-------------|
| TR-4/1            | Transportation -1 (Lower Transportation) | 12           | 02          |
| TR-4/2            | Transportation -4 (Other Department)     | 03           | 0½          |
| TR-4/3            | Safety Management                        | 03           | 0½          |
| TR-4/4            | Information Technology                   | 12           | 02          |
| TR-4/5            | Examination (One Day)                    | 06           | 01          |
|                   | <b>Total</b>                             | <b>36</b>    | <b>06</b>   |

| TR-4/1    | TRANSPORTATION - 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TR-4/1.1  | Admission formality, General Introduction of Railway and Transportation branch. Introduction of ZRTI setup, Syllabus, Timing, Examination pattern and future prospects.                                                                                                                                                                                                                                                                                                                                             |
| TR-4/1.2  | Briefing about stations, signal, normal train working.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TR-4/1.3  | Uneven / Over loading. Load on open trucks. Use of ropes and tarpaulins.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| TR-4/1.4  | Definition and Type Hot axle wagon noticed on train Fire in train, Hanging under gear parts, Load shifting.                                                                                                                                                                                                                                                                                                                                                                                                         |
| TR-4/1.5  | Types of Coaching and goods stock, description of coach no. and new wagon number system, Dimensions and various marks painted on the stock. Axle load, bearing capacity and overloading of wagons, New type of Goods and Coaching stock.                                                                                                                                                                                                                                                                            |
| TR-4/1.6  | Classification of trains, Block Rakes, Marshalling of Mail/Exp./Pass. Trains, Marshalling of Goods trains, Attaching of wagons containing explosives and dangerous or with inflammable-Goods.<br>Formation of standard Block rakes, Loaded or empty tank wagons, horse boxes, Vehicles containing trucks or motor vans loaded with cars, Attaching of wagons outside rear brake van. Attaching of dead loco to trains. Attaching of four-wheeled or goods stock on Passenger/ Mixed trains and Inspection carriage. |
| TR-4/1.7  | Standard moving dimensions, Movement of ODC/ISMD consignment.                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| TR-4/1.8  | Brief idea of various statistics Various Yard statistics to be maintained, Various returns prepared in yard.                                                                                                                                                                                                                                                                                                                                                                                                        |
| TR-4/1.9  | Detailed procedure of taking periodical census of goods and coaching stock.                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| TR-4/1.10 | Importance of Vehicle Guidance, Preparation of VG through FOIS/ICMS.                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TR-4/1.11 | Importance of feeding coaching stock in ICMS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| TR-4/1.12 | Collection and reporting of daily stock reports.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| TR-4/2   | TRANSPORTATION - 4                                                                                                                                                |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TR-4/2.1 | Brake system and Advantage of Air Brake<br>Brief idea of braking system. Various Parts and their function. Advantages of Air Brake System.                        |
| TR-4/2.2 | Examination of trains - Intensive Examination - Primary and secondary maintenance, working of stabled load, Brake power certificate, Safe to run certificate, GDR |
| TR-4/2.3 | Placement and removal memos of coaching & goods trains.                                                                                                           |

| TR-4/3   | SAFETY MANAGEMENT                                                                                                                                                                                                                                                              |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TR-4/3.1 | <b>Accident –</b> <ul style="list-style-type: none"> <li>• Sounding of Hooter, Movement of Relief trains</li> <li>• Running of ART/SPART, ARME/SPARME, Break down Special, Target Time,</li> <li>• Causes of accidents</li> <li>• Chronological Register (Log Book)</li> </ul> |
| TR-4/3.2 | <b>Disaster Management –</b> Introduction, Various Organizations, Developments on DM at National level, Golden Hour, DM Plans – at                                                                                                                                             |

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|          |                                                                                                                                                                                                       |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance.                                                                                             |
| TR-4/3.3 | <b>Fire Fighting</b> – Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher.<br>Prevention of fire.<br>Hands on Practice. |

| TR-4/4   | ETHICAL LEADERSHIP & SOFT SKILL                                                                                                  |
|----------|----------------------------------------------------------------------------------------------------------------------------------|
| TR-4/4.1 | Ethics – Meaning, Role, Need, Value and Importance in public life.                                                               |
| TR-4/4.2 | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience. |
| TR-4/4.3 | Soft Skills – Meaning, Requirements and its importance in public life.                                                           |
| TR-4/4.4 | Yoga and Meditation                                                                                                              |

| TR-4/5   | INFORMATION TECHNOLOGY                                                                     |
|----------|--------------------------------------------------------------------------------------------|
| TR-4/5.1 | Fundamental - FOIS (RMS) fundamentals, organization, activities & its merits.              |
| TR-4/5.2 | ICMS and its different reports, (COIS, PAM & CMM).                                         |
| TR-4/5.3 | Different Queries on RMS/CMS system and on FOIS web site, FOIS net, Rail net and Internet. |
| TR-4/5.4 | Feeding and Maintenance of various statistics.                                             |

| TR-4/6   | EXAMINATION                                        | Day | Hours |
|----------|----------------------------------------------------|-----|-------|
| TR-4/6.1 | <b>Paper – 1 (Transportation)</b> = Max Marks: 100 | 1   | 3     |

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Training Module for Cabin Man/Points Man/Lever Man/Gate Man Refresher

| | |
|------------|---|
| Department | Transportation |
| Course No. | TR-5 |
| Category | Cabin Man/Points Man/Lever Man/ Gate Man |
| Stage | Refresher |
| Duration | 06 Working Days = 36 Hours (including Safety Camp) |

| Module No. | Description | Hours | Days |
|-------------------|--|--------------|-------------|
| TR-5/1 | Transportation -1 (Lower Transportation) including examination | 18 | 03 |
| TR-5/2 | Safety Management | 06 | 01 |
| TR-5/3 | Safety Camp | 06 | 02 |
| | Total | 36 | 06 |

| TR-5/1 | TRANSPORTATION - 1 | |
|-----------|---|----------------|
| TR-5/1.1 | Role and importance in Railway Transportation. Brief idea of Important definitions. | |
| TR-5/1.2 | Brief idea of various signals, detonating signal and its use, points in station/yard, permanent locked point, Non-interlocked points, clamping of points, | |
| TR-5/1.3 | Colours of lever, working of single wire & double wire cabin, use of non-interlocked crank handle, clutch resetting lever, Stop collar, Electric Signal Repeater, Detector, compensator. | |
| TR-5/1.4 | Use of hand signals, SLB & BSLB, Point, Trap and Shunting Permitted Indicator. | |
| TR-5/1.5 | Working of trains during failure of signal, point, track circuit, axle counter, block instrument etc., Disconnection & Reconnection of S&T gear, precaution during disconnection, issue of cabin basement key. | |
| TR-5/1.6 | Essential of Absolute block system, condition for granting line clear and taking off signals at 'B' class station. Special attention on SWR, VTO and precaution during Foggy weather, shunting at station. | |
| TR-5/1.7 | Types and standards of interlocking, key transmitter, slotting, means of isolation. Catch & Slip siding. | |
| TR-5/1.8 | Procedure of reception and despatch of trains at single line and double line station, announcing of train, bell code, clearance of fouling mark, reversal of point. | |
| TR-5/1.9 | Reception of train on obstructed/Non-signalled line and despatch of trains from non-signalled line or line provided with common starter signal. | |
| TR-5/1.10 | Engine whistle code, Watching of train, exchange of signal with train staff, running of train without brake van, stabling and Securing of vehicle, working of material train, material lorry and motor trolley. | |
| TR-5/1.11 | Action to be taken during abnormal conditions i.e. Fire in train, train parting, train divide, run away, train overdue, abnormal condition reported on track, hot axle, hanging part, material falling, train passing without Tail Lamp/Tail Board, TSL, despatching of relief train in obstructed block section. | |
| TR-5/1.12 | LC Gate working - normal and abnormal, | |
| TR-5/1.13 | Brake System
Difference between Vacuum Brake and Air Brake System, Advantage of Air-Brake system. Single and Twin pipe Air Brake system, releasing of brake. | |
| TR-5/1.14 | Abnormal working
Alarm Chain pulling, resetting and isolating, Brake Binding, Hot Axle/hanging parts and Flat Tyre. | |
| TR-5/1.15 | EXAMINATION | Max Marks: 100 |

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| TR-5/2 | SAFETY MANAGEMENT |
|----------|---|
| TR-5/2.1 | Accident -
Common causes of yard accidents, their remedial measures and duties as a Railwaymen at the time of accident, Hooters, ART, ARME and their turning out time.
Disaster Management - Case studies. |
| TR-5/2.2 | First Aid -
Principles of First Aid, Brief description of the structure and functions of the body.
Half day Hands on Practice. |
| TR-5/2.3 | Fire Fighting -
Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire.
Half day Hands on Practice. |

| TR-5/3 | Safety Camp | 2 Days |
|--------|-------------|--------|
|--------|-------------|--------|

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**Training Module for Shunting Master/Jamadar –Refresher**

|                   |                                                           |
|-------------------|-----------------------------------------------------------|
| <b>Department</b> | <b>Transportation</b>                                     |
| Course No.        | <b>TR- 6</b>                                              |
| Category          | <b>Shunting Master/Jamadar</b>                            |
| Stage             | <b>Refresher course</b>                                   |
| Duration          | <b>06 Working Days = 36 Hours (including Safety Camp)</b> |

| <b>Module No.</b> | <b>Description</b>                                    | <b>Hours</b> | <b>Days</b> |
|-------------------|-------------------------------------------------------|--------------|-------------|
| TR-6/1            | Transportation -1 (Lower Transportation)+ Examination | 18           | 03          |
| TR-6/2            | Safety Management                                     | 06           | 01          |
| TR-6/3            | Safety Camp                                           | 12           | 02          |
|                   | <b>Total</b>                                          | <b>36</b>    | <b>06</b>   |

| TR – 6/1   |                                                                                                                                                                                                                                                                                                                                                                  | TRANSPORTATION -1 |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| TR -6/1.1  | Admission formalities, General Introduction of Railway and Transportation branch. Introduction of ZRTI setup, Syllabus, Timing, Examination pattern and future prospects.                                                                                                                                                                                        |                   |
| TR -6/1.2  | Brief idea of Important Definitions and correction slips.                                                                                                                                                                                                                                                                                                        |                   |
| TR -6/1.3  | Brief idea of station, yard and various signals with special reference to Shunt signals, Hand signals, Fog signals. Points and Trap Indicators, SPI, SLB and BSLB. Types of points and their working, locking of points at interlocked and non-interlocked stations, clamping and cotter bolting of point to avoid any chances of derailment and point bursting. |                   |
| TR -6/1.4  | Train and shunting movement during failure of signal and point, precaution during thick & foggy weather.                                                                                                                                                                                                                                                         |                   |
| TR -6/1.5  | Kinds of shunting, shunting rules, precautions during shunting, persons authorized to supervise shunting & their responsibility. Issue of shunting order and shunting certificates, shunting speeds, different shunting stages, Securing of vehicles in running line and non-running line.                                                                       |                   |
| TR -6/1.6  | Brief idea of various system of working i.e. Absolute Block System and Automatic Block System, working of LC Gate.                                                                                                                                                                                                                                               |                   |
| TR -6/1.7  | Definition, brief idea of marshalling of different trains, necessity of marshalling. Attaching of vehicles outside rear brake van, attaching of vehicles containing live stock, explosive, Dead engine and dangerous goods. Attaching of saloons, Inspections carriage, through sectional and slip coaches, Planned formation of trains.                         |                   |
| TR -6/1.8  | Specification of new rolling stock, Nomenclature of coaches and wagons, various marks on Coaching and Goods stock.                                                                                                                                                                                                                                               |                   |
| TR -6/1.9  | Standard Moving Dimensions, ODC and their movement, Speed of ODC.                                                                                                                                                                                                                                                                                                |                   |
| TR- 6/1.10 | Brake system and Advantage of Air Brake<br>Brief idea of braking system. Difference between Vacuum brake and Air Brake system, Advantages of Air Brake System. Working of Single Pipe and Double Pipe Air Brake System. Continuity test and its importance, Various components of vacuum brake system and air brake system.                                      |                   |
| TR- 6/1.11 | Examination of trains, Brake Power Certificate, percentage of brake power required in Passenger/Mixed/Goods trains,<br>Alarm chain pulling – resetting/isolating, Causes of Brake Binding and its releasing, Flat tyre and follow up action.                                                                                                                     |                   |
| TR- 6/1.12 | Couplings and its components,<br>Brief idea of new rolling coaching and goods stock including LHB coach, important under gear component and their use, different types of couplings, method and precaution of attaching/detaching of vehicle.                                                                                                                    |                   |
| TR-6/1.13  | <b>Paper – (Transportation) =</b><br>Max Marks: 100                                                                                                                                                                                                                                                                                                              |                   |

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| TR – 6/2  | SAFETY MANAGEMENT                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TR-6/2.1  | <b>Accident -</b><br>Various important definition, classification of accident, Running of ART/ARME, Hooters, Target time of ART/ARME, Ex-gratia payment.<br>Duties of Shunting Jamadar/Shunting Master when serious accident takes place. Common causes of yard accident and their remedial measures.<br>Disaster Management – Brief discussion on train accident. |
| TR-6/2.2  | <b>First Aid –</b> (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs.<br>Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half Day Hands on Practice.   |
| TR- 6/2.3 | <b>Fire Fighting -</b><br>Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire.<br>Half day Hands on practice.                                                                                                                                                     |

| TR-6/3 | Safety Camp | 2 Days |
|--------|-------------|--------|
|--------|-------------|--------|

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Training Module for Track Machine Supervisor/Operator

| | |
|-------------------|---|
| Department | Engineering |
| Course No. | SI/SP-1 |
| Category | Track Machine Supervisors /Operator Initial and Promotion |
| Stage | Induction through RRB / Promotion through Departmental Examination |
| Duration | 18 Working Days = 108 Hours |

| Module No. | Description | Hours | Days |
|-------------------|--|--------------|-------------|
| SI/SP-1/1 | Foundation course | 06 | 01 |
| SI/SP-1/2 | Transportation -1 (Lower Transportation) | 48 | 08 |
| SI/SP-1/3 | Safety Management | 18 | 03 |
| SI/SP-1/4 | Information technology | 18 | 03 |
| SI/SP-1/5 | Ethical Leadership & Soft Skill | 12 | 02 |
| SI/SP-1/6 | Examination | 06 | 01 |
| | TOTAL | 108 | 18 |

| SI/SP-1/1 | FOUNDATION COURSE |
|-------------|---|
| SI/SP-1/1.1 | Admission formalities. |
| SI/SP-1/1.2 | History and development of Indian Railways. Organization of Indian Railways. Various organisations working under Ministry of railways. Future strategies. |
| SI/SP-1/1.3 | Organization & functions of all departments, Functions of Operating department and Safety departments at various levels, CRS organization and functions & objectives etc. |

| SI/SP-1/2 | TRANSPORTATION -1 |
|--------------|--|
| SI/SP-1/2.1 | General Introduction of Railway and Transportation branch. Introduction of ZRTI setup, Syllabus, Timing, Examination pattern and future prospects. |
| SI/SP-1/2.2 | Responsibility of railway employee in respect of their duties and safety. |
| SI/SP-1/2.3 | Object of framing General and Subsidiary Rules, SWR & their necessity. General idea of WTT, Supply of Rules books, circulars to railway servants. |
| SI/SP-1/2.4 | Important Definitions of G & SR Chapter No.1, Classification of stations. |
| SI/SP-1/2.5 | Conduct of railway servants while performing duty. (Chapter no. 2 of G&SR) |
| SI/SP-1/2.6 | Different classes of stations and their working. Station layouts, Station limits, Station section Block section limits etc. |
| SI/SP-1/2.7 | Type of Signals (Fixed, Hand, Detonating & Warning flashing light), their importance, aspect and indications. Signals in Automatic Block Systems, their aspect & indications, various Boards, Indicators. Points, their functions and relations with the signals, Whistle code, Failure of points and signals – reception and dispatch of trains. |
| SI/SP-1/2.8 | Warning Boards (Passenger, Goods, Shunting & Station), Shunting Limit Board, Block Section Limit Board, STOP Board, Caution & Termination Boards, etc. |
| SI/SP-1/2.9 | Reception and Dispatch of Track Machine, reception and dispatch of trains on obstructed lines, non-signaled/non-running line etc. |
| SI/SP-1/2.10 | Track Machines, general rules applicable, essential equipments, manning, competency certificate, Working of Track Machines at Station & in Block section, Break-down of Track Machine. |
| SI/SP-1/2.11 | Knowledge and use of various Operating Forms |
| SI/SP-1/2.12 | Definition, Principles and standards of Interlocking, Modes of locking and securing of points, Definition and Type of Isolation. Use of inter locking and Isolation in train operation & during Shunting. |
| SI/SP-1/2.13 | Essentials of Absolute Block System, Automatic Block System and other system of workings as applicable, Means of communication. |
| SI/SP-1/2.14 | Issuing of Caution order and responsibility of TTM/TW /Track machine operator regarding Caution Order, speed restrictions. |
| SI/SP-1/2.15 | SWR, Working Time Table, Head Light, Marker Light, Flasher Light, Blinker Light, Means of Communication. |
| SI/SP-1/2.16 | Shunting and Stabling of Track Machine - Responsibility of Track Machine operator |
| SI/SP-1/2.17 | Line block, Protection of Engineering works & Indicators. |
| SI/SP-1/2.18 | Precautions in case of – <ul style="list-style-type: none"> • Track Machine unable to proceed for any reason between stations, • Hot Axle / hot roller bearing or damaged vehicle in Train, • Noticed any abnormality in train, track and other installations which may cause danger to train operation, • Flooding of track |

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| SI/SP-1/3 SAFETY MANAGEMENT | |
|-----------------------------|---|
| SI/SP-1/3.1 | Accidents – <ul style="list-style-type: none"> • Various Definitions, Classification, • Safety in train operation • Consequential & other Train accidents • Indicative Accidents – Class F, G & H • Accident Management- Sounding of Siren, Movement of Relief trains • Running of ART, ARME, Hooters, Target Time and Ex-gratia payments • Protection of line, Preservation clues at the site • Fire on Trains, Hot Axle, Train Parting / Dividing • Duties of Track Machine operators in case of accidents or obstruction |
| SI/SP-1/3.2 | Disaster Management – Introduction, Golden Hour |
| SI/SP-1/3.3 | First Aid – (Theory & Practical) Aims and Objective of First Aid. Half Day Hands on Practice. |
| SI/SP-1/3.4 | Fire Fighting – Theory & Demonstration, Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Hands on Practice. |

| SI/SP-1/4 INFORMATION TECHNOLOGY | |
|----------------------------------|--|
| SI/SP-1/4.1 | Computerization in Indian Railways |
| SI/SP-1/4.2 | Basic Knowledge of Computers(Word, Excel, Power Point), Means of Social Media and their uses |
| SI/SP-1/4.3 | FOIS, RMS,TMS, COIS, ICMS, PAM, CMS, NTES etc- an overview |
| SI/SP-1/4.4 | Hands on Practice. |

| SI/SP-1/5 ETHICAL LEADERSHIP & SOFT SKILL | |
|---|--|
| SI/SP-1/5.1 | Ethics – Meaning, Role, Need, Value and Importance in public life. |
| SI/SP-1/5.2 | Leadership – Meaning, Role, Need, Value and Importance, Team building, Crowded/Mob Management. |
| SI/SP-1/5.3 | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience. |
| SI/SP-1/5.4 | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life. |
| SI/SP-1/5.6 | Soft Skills – Meaning, Requirements and its importance in public life. |
| SI/SP-1/5.7 | Yoga, PT, Meditation and Shramdan. |
| SI/SP-1/5.8 | Sports |

| SI/SP-1/6 EXAMINATION | | Days | Hours |
|-----------------------|---|----------|----------|
| SI/SP-1/6.1 | Paper – 1 (Transportation) – Marks = 100 | 1 | 3 |

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**Training Module for Track Machine Supervisor / Operator Refresher**

|                   |                                                           |
|-------------------|-----------------------------------------------------------|
| <b>Department</b> | <b>Engineering</b>                                        |
| <b>Course No.</b> | <b>SR-1</b>                                               |
| <b>Category</b>   | <b>Track Machine Supervisor / Operator</b>                |
| <b>Stage</b>      | <b>Refresher course</b>                                   |
| <b>Duration</b>   | <b>09 Working Days = 54 Hours (Excluding Safety Camp)</b> |

| <b>Module No.</b> | <b>Description</b>                       | <b>Hours</b> | <b>Days</b> |
|-------------------|------------------------------------------|--------------|-------------|
| SR-1/1            | Transportation -1 (Lower Transportation) | 30           | 05          |
| SR-1/2            | Safety Management                        | 12           | 02          |
| SR-1/3            | Ethical Leadership & Soft Skill          | 06           | 01          |
| SR-1/4            | Examination                              | 06           | 01          |
|                   | <b>Total</b>                             | <b>54</b>    | <b>09</b>   |

| SR-1/1    | TRANSPORTATION - 1                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SR-1/1.1  | Admission formalities, General Introduction of Railway and Transportation branch. Introduction of ZRTI setup, Syllabus, Timing, Examination pattern and future prospects.                                                                                                                                                                                                                      |
| SR-1/1.2  | Briefing about important definition, amendment slips.                                                                                                                                                                                                                                                                                                                                          |
| SR-1/1.3  | Different classes of stations and signals.                                                                                                                                                                                                                                                                                                                                                     |
| SR-1/1.4  | Type of Signals (Fixed, Hand, Detonating & Warning flashing light), their importance, aspect and indications. Signals in Automatic Block Systems, their aspect & indications, various Boards, Indicators. Points, their functions and relations with the signals. Defective Points and defective signals.                                                                                      |
| SR-1/1.5  | Reception and Dispatch of Track Machine, reception and dispatch of trains on obstructed lines, non-signaled/non-running line etc.                                                                                                                                                                                                                                                              |
| SR-1/1.6  | Various Operating Forms and their use                                                                                                                                                                                                                                                                                                                                                          |
| SR-1/1.7  | Definition, Principles and standards of Interlocking, Modes of locking and securing of points, Isolation, Use of inter locking and Isolation in train operation & during Shunting.                                                                                                                                                                                                             |
| SR-1/1.8  | Various Systems of working, Means of communication.                                                                                                                                                                                                                                                                                                                                            |
| SR-1/1.9  | Issuing of Caution order and responsibility of Track Machine operator regarding Caution Order, speed restrictions, Whistle code.                                                                                                                                                                                                                                                               |
| SR-1/1.10 | Shunting of Track Machine, Working at Station/in Block section and in Automatic Block system, Break-down of Track Machine.                                                                                                                                                                                                                                                                     |
| SR-1/1.11 | Track Machines, general rules applicable, essential equipments, manning, competency certificate,                                                                                                                                                                                                                                                                                               |
| SR-1/1.12 | SWR, Working Time Table, Head Light, Marker Light, Flasher Light, Blinker Light.                                                                                                                                                                                                                                                                                                               |
| SR-1/1.13 | Line block, Protection of Engineering works & Indicators.                                                                                                                                                                                                                                                                                                                                      |
| SR-1/1.14 | Precautions during – <ul style="list-style-type: none"> <li>• Fire,</li> <li>• In case of Track Machine unable to proceed for any reason between stations,</li> <li>• Hot Axle / hot roller bearing or damaged vehicle in Train,</li> <li>• Noticed any abnormality in train, track and other installations which may cause danger to train operation,</li> <li>• Flooding of track</li> </ul> |
| SR-1/1.15 | Use of PCP/ECP Box                                                                                                                                                                                                                                                                                                                                                                             |

| <b>SR-1/2 SAFETY MANAGEMENT</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SR-1/2.1                        | <b>Accidents –</b> <ul style="list-style-type: none"> <li>• Various Definitions, Classification,</li> <li>• Safety in train operation</li> <li>• Consequential &amp; other Train accidents</li> <li>• Indicative Accidents – Class F, G &amp; H</li> <li>• Accident Management- Sounding of Siren, Movement of Relief trains</li> <li>• Running of ART, ARME, Hooters, Target Time and Ex-gratia payments</li> <li>• Protection of line, Preservation clues at the site</li> <li>• Fire on Trains, Hot Axle, Train Parting / Dividing</li> <li>• Duties of Track Machine operators in case of accidents or obstruction</li> </ul> |
| SR-1/2.2                        | <b>Disaster Management</b> – Introduction, Golden Hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| SR-1/2.3                        | <b>First Aid</b> – (Theory & Practical) Aims and Objective of First Aid. Half Day Hands on Practice.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| SR-1/2.4                        | <b>Fire Fighting</b> – Theory & Demonstration, Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Hands on Practice.                                                                                                                                                                                                                                                                                                                                                                                                                               |

| <b>SR-1/3 ETHICAL LEADERSHIP &amp; SOFT SKILL</b> |                                                                                                                                  |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| SR-1/3.1                                          | Ethics – Meaning, Role, Need, Value and Importance in public life.                                                               |
| SR-1/3.2                                          | Leadership – Meaning, Role, Need, Value and Importance, Team building,                                                           |
| SR-1/3.3                                          | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience. |
| SR-1/3.4                                          | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life.                            |
| SR-1/3.5                                          | Soft Skills – Meaning, Requirements and its importance in public life.                                                           |
| SR-1/3.6                                          | Yoga, PT, Meditation and Shramdan.                                                                                               |
| SR-1/3.7                                          | Sports                                                                                                                           |

| <b>SR-1/4 EXAMINATION</b> |                                                                         | <b>Day</b> | <b>Hours</b> |
|---------------------------|-------------------------------------------------------------------------|------------|--------------|
| SR-1/4.1                  | <b>Paper – 1 (Transportation)</b> = Max Marks: 100<br><b>Model Room</b> | 1          | 3            |

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Training Module for
Commercial-cum-Ticket Clerks Initial & Promotion
Senior Commercial cum Ticket Clerks Initial
Commercial Apprentice – 1st Phase Initial/Promotion

| | |
|------------|--|
| Department | Commercial |
| Module No. | CI/CP-1 |
| Category | Commercial cum Ticket Clerk Initial/Promotion
Sr. Commercial cum Ticket Clerk Initial
Commercial Apprentice – Ist Phase Initial/Promotion |
| Stage | Induction through RRB or Promotion through departmental examination |
| Duration | 60 working days / 360 Hours |

| Module No. | Description | Hours | Days |
|-------------------|-----------------------------------|--------------|-------------|
| CI/CP1/1 | Foundation Course | 18 | 03 |
| CI/CP1/2 | Coaching Theory | 42 | 07 |
| CI/CP1/3 | Coaching Practical | 36 | 06 |
| CI/CP1/4 | Goods Theory | 36 | 06 |
| CI/CP1/5 | Goods Practical | 36 | 06 |
| CI/CP1/6 | Accounts | 30 | 05 |
| CI/CP1/7 | Safety Management | 18 | 03 |
| CI/CP1/8 | Ethical Leadership & Soft Skills | 12 | 02 |
| CI/CP1/9 | Information Technology | 30 | 05 |
| CI/CP1/I0 | Establishment | 18 | 03 |
| CI/CP1/I1 | Field Training (12 Days x 6Hours) | 72 | 12 |
| CI/CP1/I2 | Examination | 12 | 02 |
| | TOTAL | 360 | 60 |

| CI/CP-1/1 | FOUNDATION COURSE |
|--------------|--|
| CI/CP-1/I.1 | Admission formalities. |
| CI/CP-1/I.2 | General Administration - History and Development of Indian Railways, organisation of Indian Railways, Various working under Ministry of railways, future strategies. |
| CI/CP-1/I.3 | Transportation - Railways as a mode of transport in the country and key statistics, Organisation of function of Transportation department. |
| CI/CP-1/I.4 | Commercial - Organisation, role and functions, complaints and public relation. |
| CI/CP-1/I.5 | Safety - Organisation, role and functions, duties of Railwaymen in ensuring Safety and Security, Accident, causes and preventive measure, enquires, preparations of joint note & CRS organisation. |
| CI/CP-1/I.6 | Personnel - Organisation and functions. |
| CI/CP-1/I.7 | Accounts - Organisation, role and functions. |
| CI/CP-1/I.8 | Audit - Organisation, role and functions. |
| CI/CP-1/I.9 | Civil Engg. - Organisation, role and functions. |
| CI/CP-1/I.10 | Mechanical Engineering - Organisation, role and functions. |
| CI/CP-1/I.11 | Electric Engineering - Organisation, role and functions. |
| CI/CP-1/I.12 | S & T Engineering - Organisation, role and functions. |
| CI/CP-1/I.13 | Stores - Organisation, role and functions. |
| CI/CP-1/I.14 | Vigilance - Organisation, role & functions |
| CI/CP-1/I.15 | Security - RPF & GRP - Organisation, role and functions. |
| CI/CP-1/I.16 | Staff welfare – Provisions. |
| CI/CP-1/I.17 | Official Language Implementation – Importance – Various Incentives for qualifying in Hindi proficiency |

| CI/CP-1/2 | COACHING THEORY |
|-------------|---|
| CI/CP-1/2.1 | Organisation of Commercial Department, its functions, Reference Books and their use. |
| CI/CP-1/2.2 | Various classes of accommodation on railway, Minimum chargeable distance and Minimum Fare, superfast surcharge, reservation fee. Rounding off fare rules, combined ticket fare. |
| CI/CP-1/2.3 | Categorisation of stations, cleanliness of stations
Passenger amenities at stations and in trains, facilities for lady passengers, Divyangjan, Sr. Citizen and Military personnel etc., cloak room, locker, retiring room, Waiting rooms, IVRS, NTES, Touch screen, PA system, rail travel service agents. Railway Tourist Agents. CBO/ CBA/OA. |
| CI/CP-1/2.4 | HOR, Identity card cum railway pass for MPs and Ex-MPs, Rail Travel Coupons for MLA/MLC & Accredited Press Correspondents and News Cameramen. |
| CI/CP-1/2.5 | Kinds of Rly. Passes – Class Eligibility, Luggage Free Allowance and other facilities and P.T.O. |
| CI/CP-1/2.6 | Various Railway Act sections related to commercial deptt., |
| CI/CP-1/2.7 | Booking Office - Functions, PRS, General office duties of commercial staff in booking, reservation, Kinds of journey and non journey tickets and details thereof, e-ticket, UTS, I-ticket. Break Journey Rule, Break Journey on various kinds of tickets and passes, Circular Journey, Foreign Tourist Ticket Through On Line. Various Military Warrants, Military Concession Forms/Vouchers, Police Warrant, Jail Requisition. Various kinds of concessions.
Opening of additional counters to clear extra rush. |

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| CI/CP-1/2.8 | <p>Reservation Office - Reservation of seats/berths, compartment, coach/tourist car, Special trains, various reservation quotas, RAC, Tatkal Seva, group reservation, change in name of reservation, preponement & postponement of reservation, preparation of reservation charts. Permission to board at enroute station, reservation from intermediate stations & out stations, Credit card, reservation on internet and mobile phone. Up gradation scheme, Bed roll charge.</p> <p>Refund of fare rules, issue of duplicate ticket in case of original is lost/ torn/ mutilated, issue of TDR & EDR/Computerized Coaching Refunds Scheme and Caching refunds.</p> |
| CI/CP-1/2.9 | JTBS & STBA, YTSK, Mobile ticketing, VIKALP, Group reservation and Charting, kinds of time table and their use, Telephone no. 138, 139 & 182. |
| CI/CP-1/2.10 | <p>Luggage – Definition, articles not accepted as luggage, articles allowed free and not weighed, Free Allowance, Grace Limit, Compartment Limit, cases in which free allowance not given.</p> <p>Carriage of luggage with passenger in passenger compartment and in Brake Van.</p> |
| CI/CP-1/2.11 | <p>Parcel - Rules for acceptance, booking and carriage of parcels as per Coaching Tariff., categorisation (R,P,S) of trains for the purpose of booking of parcel, PLM, Forwarding Note and its execution. PMS, HST, POS.</p> <p>Booking of corpses, human ashes, human skeletons and parts of human body.</p> <p>Rules for booking and carriage of 2, 3 and 4 wheeled carriages such as bicycle, scooter, motorcycle etc. in Luggage and Parcel and minimum weight condition, percentage charge.</p> <p>Booking and charging of animals and birds.</p> <p>Booking of News paper, Magazine and perishable items.</p> <p>Different types of delivery of parcels and luggage on RR/LT, without RR/LT, Delivery of perishable articles on deposit of cost of goods, Demurrage & Wharfage Charge, Damage & Deficiency Message, DDM Register.</p> |
| CI/CP-1/2.12 | Disposal of Booked and unclaimed, unbooked and unclaimed and unconnected goods, NR Cell, transit time, overdue consignment, over carried consignment, Re-booking & Diversion. |
| CI/CP-1/2.13 | <p>Ticket Checking - Duties of Ticket checking staff, Object of checking and collection of tickets, Submission of Ticket Collector's Report. Special points to be kept in view during checking, Medical assistance to the passengers, HHT, Various cases of irregular travelling and charging of excess fare and excess charge, Left behind tickets, ticket checking stations, kinds of Nippers and their use. Action to be taken when passengers are not able to pay the charges, Handing over memo, preparation of charge sheet, Charging of unbooked luggage and partially booked luggage.</p> <p>Different types of ticket checks to combat ticketless travel.</p> |
| CI/CP-1/2.14 | Guard Certificate – persons authorised to issue, conditions and circumstances under which issued and procedure of issue. |
| CI/CP-1/2.15 | Duties of commercial staff in abnormal conditions i.e. ACP, RTT etc. |
| CI/CP-1/2.16 | Rules for booking of various types of special trains and coaches. |
| CI/CP-1/2.17 | Information about tourist trains such as Palace On Wheel, Royal Orient Express, Fairy Queen etc. |
| CI/CP-1/2.18 | Public Grievance Redressal organisation, public complaints and their disposal, Computerisation of complaints. |
| CI/CP-1/2.19 | Cash Safe, trouble shooting digital section. |
| CP-1/2.20 | Consumer protection act, Introduction to consultative committees-SCC, DRUCC, ZRUCC, NRUCC . |

| CI/CP-1/3 | COACHING PRACTICAL |
|--------------|---|
| CI/CP-1/3.1 | Consultation of Alphabetical list of Railway Station in India, Zonal Rly. Map, Indian Rly, Map and Timetable, RBS. |
| CI/CP-1/3.2 | Calculation of distance from Zonal Railway Local distance tables, Through junction distance tables of other Railways. |
| CI/CP-1/3.3 | Calculation of fares & combined fare for Public, fare for Military personnel on Military warrants, concession order, Public Concession orders and PTOs. |
| CI/CP-1/3.4 | Calculation of fare for Circular journey ticket, Season Tickets. |
| CI/CP-1/3.5 | Calculation of fare for all kinds of trains, GST etc. |
| CI/CP-1/3.6 | Calculation of cancellation charge and refund of fare under various circumstances. |
| CI/CP-1/3.7 | Cloak Room charge and Locker charge. |
| CI/CP-1/3.8 | Reservation of seats, berths, compartments, carriage and tourist cars and special trains. |
| CI/CP-1/3.9 | Calculation of excess fares and excess charge on irregular traveling. |
| CI/CP-1/3.10 | Off-line practice on UTS/PRS. |
| CI/CP-1/3.11 | Calculation of freight for :
Luggage., Parcel, news paper, magazine, corpses, human ashes, human skeletons, parts of body, vehicles, animals etc. |
| CI/CP-1/3.12 | Calculation of Percentage charge on excess value. |
| CI/CP-1/3.13 | Calculation of Demurrage and Wharfage on Luggage and Parcel. |
| CI/CP-1/3.14 | Hands on practice on fillings various forms and calculation. |
| CI/CP-1/4 | GOODS THEORY |
| CI/CP-1/4.1 | Kinds of goods handled by the Railway – General goods, Dangerous and explosives goods, offensive goods, live stock, perishables, contrabands, bulky articles, railway material, military traffic, goods in loose, POL, ODC. |
| CI/CP-1/4.2 | Particulars exhibited on a wagon, various kinds of wagons. Places where the goods traffic is dealt with – station, sidings, out agencies etc. Various types of wagons in use and matter displayed on a wagon. |
| CI/CP-1/4.3 | Weighment, reweighment procedure and its upkeeping, routing of traffic, rationalization scheme, In motion way Bridge and Pre Weigh Bin wagon loading system. |
| CI/CP-1/4.4 | Forwarding Note, its execution and importance, various types of Forwarding Notes and their use. |
| CI/CP-1/4.5 | Preferential traffic schedule and wagon demand register. Registration of indent, e-indent, e-indent procedure, re-generation of custom e-way bill, allotment and supply of wagons, change in the name of commodity, change in the name of destination station. Selection of wagons, sealing riveting of wagons & locking of wagons. Check lines on bagged consignments loaded in open wagons, use of tarpaulins, PLM. |
| CI/CP-1/4.6 | Wagon Demand Register, placement of wagons at goods shed, Wagon Transfer Register, loading of out ward goods, Out ward tally book. |
| CI/CP-1/4.7 | Kinds of rates, classification of commodities, block rake composition. |
| CI/CP-1/4.8 | Rules for acceptance, booking and carriage of contraband goods, intoxicating drugs, dangerous and offensive goods. |
| CI/CP-1/4.9 | Rules for acceptance, booking carriage and delivery of live stock and Bulky articles. |
| CI/CP-1/4.10 | Rules for acceptance, booking carriage and delivery of Railway Material and Military Goods. |

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| CI/CP-1/4.11 | Rules for booking block rake and TMS, e-payment, e-TRR |
| CI/CP-1/4.12 | Various charges leaviable as per goods tariff in addition to the freight |
| CI/CP-1/4.13 | Rules for booking of Issue of RR and disposal of various copies of invoice. Out ward index register and wagon exchange book, traffic to and from CBO/CBA/OA and sidings. |
| CI/CP-1/4.14 | Unloading of wagons, reporting discrepancies and maintenance of DD register. Punitive charges for overloading of goods, Inward tally book , Inward invoice index register, Under charge, Over charge, Over charge sheet, Inventory of goods . |
| CI/CP-1/4.15 | Delivery of Goods. Various types of delivery. Delivery in the absence of RR. Indemnity bond- Their types and execution. Gate pass system. Preparation & Submission of DR/MGR, Mis declaration of goods, Goods refunds. |
| CI/CP-1/4.16 | Rebooking and Diversion. |
| CI/CP-1/4.17 | Goods cash book and other registers maintained at goods office, preparation of goods returns including balance sheet and their submission . |
| CI/CP-1/4.18 | Disposal of Booked & unclaimed, Unconnected goods, e-balance sheet. NR cell and its functions. |
| CI/CP-1/4.19 | Cause of claims and their prevention. Organization of claims and refunds. Procedure for settlement of claims, Common Carrier Liabilities. |
| CI/CP-1/4.20 | Wharfage & Demurrage charges. |
| CI/CP-1/4.21 | Functioning of FOIS and working on TMS. |
| CI/CP-1/4.22 | Siding and its working, rule regarding stacking of goods. |
| CI/CP-1/4.23 | Freight Incentive Scheme and Transportation products, Wagon investment scheme. |
| CI/CP-1/4.24 | Introduction on freight marketing. |

| CI/CP-1/5 | GOODS PRACTICAL |
|-------------|--|
| CI/CP-1/5.1 | Calculation of Freight for wagon loads and train load consignment (OR & RR) |
| CI/CP-1/5.2 | Calculation of Freight for various kinds of rake/wagons/CC+6, CC+8, 25 tonne axle load |
| CI/CP-1/5.3 | Calculation of Percentage Charge on excess value, GST. |
| CI/CP-1/5.4 | Calculation of Freight for Military Goods and RMC. |
| CI/CP-1/5.5 | Calculation of demurrage and wharfage charges |
| CI/CP-1/5.6 | Calculation of Freight for animals and coal traffic as per IRCA Goods Tariff. |
| CI/CP-1/5.7 | Over weight charging, calculation of under and over charges. |

| CI/CP-1/6 | ACCOUNTS |
|-------------|---|
| CI/CP-1/6.1 | Traffic Accounts Office and TIA. |
| CI/CP-1/6.2 | Definitions, sources of railway earnings. |
| CI/CP-1/6.3 | Various types of forms and registers used in the booking, reservation, parcel, goods and TC office. |
| CI/CP-1/6.4 | Indent of Money Value Book, Indent & estimate of computer tickets, Emergent Indent. |
| CI/CP-1/6.5 | DTC book, Remittance of cash through CR Note, TR Note, Bank remittance, Rail Shakti. |
| CI/CP-1/6.6 | Various reports and Returns submitted by booking, reservation parcel, goods and TC office. |
| CI/CP-1/6.7 | Accountal of EFT, BPT, RTC, NIT and various vouchers. |

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| CI/CP-1/6.8 | Disposal of collected tickets. |
| CI/CP-1/6.9 | DTCR (Daily Train Collection Report), Abnormal Tickets and their DTCR. |
| CI/CP-1/6.10 | Non issued ticket, obsolete tickets and their disposal. |
| CI/CP-1/6.11 | Station outstanding and their clearance, Debit register, Error schedule. |
| CI/CP-1/6.12 | Theory and practical of Coaching/Goods Balance Sheet. |
| CI/CP-1/6.13 | Withdrawal from Station Earning. |

| CI/CP-1/7 SAFETY MANAGEMENT | |
|-----------------------------|--|
| CI/CP-1/7.1 | Accident :
Various important definitions, classification of accident, Chain of command during accident, running of ART/ARME, Hooter, Target time of ART/ARME, Duties of Sr. Commercial Supervisor/ Commercial staff at different locations at the time of accident, Ex-gratia payment, Compensation -Section 124, 124-A. |
| CI/CP-1/7.2 | Disaster Management – Introduction, Various Organizations, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance. |
| CI/CP-1/7.3 | First Aid – (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs.
Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half Day Hands on Practice. |
| CI/CP-1/7.4 | Fire Fighting – Theory & Demonstration, Civil defence.
Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire.
Half Day Hands on Practice. |

| CI/CP-1/8 INFORMATION TECHNOLOGY | |
|----------------------------------|---|
| CI/CP-1/8.1 | Computerization in Indian Railways |
| CI/CP-1/8.2 | Basic Knowledge of Computers(Word, Excel, Power Point), means of Social Media and their uses |
| CI/CP-1/8.3 | FOIS, RMS, TMS, PMS, ICMS, UTS, , UTS on mobile App, PRS, NTES, RBS, HHT, POS etc an overview |
| CI/CP-1/8.4 | Different means of UTS/PRS, Feeding of station in UTS, searing of station code, latest circulars etc. |
| CI/CP-1/8.5 | Method of accountal, generation of RR and various reports and preparation of e-Balance Sheet. |
| CI/CP-1/8.6 | Prepare and Cancellation/NIT of a ticket on UTS/PRS system. |
| CI/CP-1/8.7 | Hands on Practice. |

| CI/CP-1/9 ETHICAL LEADERSHIP & SOFT SKILL | |
|---|--|
| CI/CP-1/9.1 | Ethics – Meaning, Role, Need, Value and Importance in public life. |
| CI/CP-1/9.2 | Leadership – Meaning, Role, Need, Value and Importance, Team building, Crowed/Mob Management. |
| CI/CP-1/9.3 | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience, Brain Storming, |

| | |
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| | Perception. Forgiveness, Case studies/ inspirational videos. |
| CI/CP-1/9.4 | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life. |
| CI/CP-1/9.5 | Customer care - Public perception, public relations, courtesy, Customer service its importance and provision and Team working. |
| CI/CP-1/9.6 | Soft Skills – Meaning, Requirements and its importance in public life. |
| CI/CP-1/9.7 | Yoga, PT, Meditation and Shramdan. |
| CI/CP-1/9.8 | Sports |

| CI/CP-1/10 | ESTABLISHMENT |
|--------------|--|
| CI/CP-1/10.1 | Leave - their kinds and rules, Leave encashment Rule. |
| CI/CP-1/10.2 | Passes - their kinds, Rules and eligibility, All India Leave Travel Concession (AILTC). |
| CI/CP-1/10.3 | Pay & Allowances - Entitlements, Rules regarding TA, DA, Night Duty Allowance, Overtime and their curtailment, Contingency charges and Composite Transfer Grant. |
| CI/CP-1/10.4 | Main provisions of Railway Service Conduct Rules |
| CI/CP-1/10.5 | Seniority after the Induction Course at ZRTI, Career Prospects. |
| CI/CP-1/10.6 | Duty Roster - Description and classification, statutory provisions, periodical rest, long-on, short-off, split shift, penalty for violation of HWPR. |
| CI/CP-1/10.7 | D& AR – Brief Introduction and provisions. |
| CI/CP-1/10.8 | PNM, JCM, PREM, RTI, SBF, NPS, Confidential Report (APAR). |

| CI/CP-1/11 | FIELD TRAINING |
|--------------|--------------------------|
| CI/CP-1/11.1 | Field Training (12 Days) |

| CI/CP-1/12 | EXAMINATION | Day | Hours |
|--------------|--|-----|-------|
| CI/CP-1/12.1 | Paper – 1 (Coaching Theory & Practical)
Max Marks: 100
[Obj: 40 Marks; Descriptive: 60 Marks] | 1 | 3 |
| CI/CP-1/12.2 | Paper – 2 (Goods Theory & Practical)
Max Marks: 100
[Obj: 40 Marks; Descriptive: 60 Marks] | 2 | 3 |
| CI/CP-1/12.3 | Paper – 3 (Official Language, Safety management, Ethical leadership, Information Technology and Establishment)
Max Marks: 100
[Obj: 40 Marks; Descriptive: 60 Marks]. | 2 | 3 |

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**Training Module for  
Commercial Supervisors & Inspectors  
Commercial Apprentice – 2<sup>nd</sup> Phase**

|                   |                                                                                              |
|-------------------|----------------------------------------------------------------------------------------------|
| <b>Department</b> | <b>Commercial</b>                                                                            |
| Module No.        | <b>CI/CP-2</b>                                                                               |
| Category          | <b>Commercial Supervisors and Inspectors/<br/>Commercial Apprentice 2<sup>nd</sup> Phase</b> |
| Stage             | <b>Induction through RRB / Promotion through department examination</b>                      |
| <b>Duration</b>   | <b>50 working days / 300 Hours</b>                                                           |

| <b>Module No.</b> | <b>Description</b>                       | <b>Hours</b> | <b>Days</b> |
|-------------------|------------------------------------------|--------------|-------------|
| CI/CP-2/1         | Advanced Coaching Theory                 | 60           | 10          |
| CI/CP-2/2         | Advanced Goods Theory                    | 60           | 10          |
| CI/CP-2/3         | Accounts                                 | 18           | 03          |
| CI/CP-2/4         | Transportation                           | 36           | 06          |
| CI/CP-2/5         | Establishment, Management & Work Study   | 18           | 03          |
| CI/CP-2/6         | Stores                                   | 06           | 01          |
| CI/CP-2/7         | Statistics                               | 06           | 01          |
| CI/CP-2/8         | Safety Management                        | 18           | 03          |
| CI/CP-2/9         | Ethical Leadership & Soft Skill          | 12           | 02          |
| CI/CP-2/10        | Information Technology                   | 36           | 06          |
| CI/CP-2/11        | <b>Field Training (2 Days x 6 Hours)</b> | <b>12</b>    | <b>02</b>   |
| CI/CP-2/12        | Examination                              | 18           | 03          |
|                   | <b>TOTAL</b>                             | <b>300</b>   | <b>50</b>   |

| CI/CP-2/1    | ADVANCED COACHING THEORY                                                                                                                                                                    |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CI/CP-2/1.1  | Theory of Rates and its salient features.                                                                                                                                                   |
| CI/CP-2/1.2  | Passenger fare structure and freight structure of luggage, parcel and goods. Outsourcing of ticket sale (JTBS/STBA/YTSIK). Passenger Profile Management (PPM) and running of special train. |
| CI/CP-2/1.3  | Categorization of stations for the purpose of amenities, Passenger Amenities – Minimum, Essential, Recommended and Desirable Amenities, model stations.                                     |
| CI/CP-2/1.4  | Causes of ticket less travelling and different kinds of checks. Various irregularities, leakage of revenue and fraud.                                                                       |
| CI/CP-2/1.5  | Catering policy - 2017.                                                                                                                                                                     |
| CI/CP-2/1.6  | Policy for Water Vending machine                                                                                                                                                            |
| CI/CP-2/1.7  | Policy for installation of ATM                                                                                                                                                              |
| CI/CP-2/1.8  | Multi Purpose Stall.                                                                                                                                                                        |
| CI/CP-2/1.9  | Commercial advertisement in trains and at stations. OHA, Mobile asset, Rail Display Network, Non-Fare Revenue.                                                                              |
| CI/CP-2/1.10 | Cleanliness at stations and in trains, Pay & Use Toilets.                                                                                                                                   |
| CI/CP-2/1.11 | Cycle, Motor cycle, Scooter and Car parking.                                                                                                                                                |
| CI/CP-2/1.12 | Passenger Information System                                                                                                                                                                |
| CI/CP-2/1.13 | Parcel Management System.                                                                                                                                                                   |
| CI/CP-2/1.14 | Leasing of SLR and VPU.                                                                                                                                                                     |
| CI/CP-2/1.15 | Railway Act. Section 123 to 129 regarding railway liability in rail accident and untoward incidents, Payment of Ex-gratia and compensation.                                                 |
| CI/CP-2/1.16 | Railway Users Consultative Committees and Council.                                                                                                                                          |
| CI/CP-2/1.17 | Inspections, definitions and their objects, inspections of stations, Parcel office, Booking office, Reservation office, Goods shed and catering service.                                    |
| CI/CP-2/1.18 | Duties of Dy. SS (Commercial), Commercial Inspector and Supervisors.                                                                                                                        |
| CI/CP-2/1.19 | RTI Act 2005.                                                                                                                                                                               |
| CI/CP-2/1.20 | Opening and closing of Halt Station.                                                                                                                                                        |
| CI/CP-2/1.21 | ICMS, IRPSM, IRMMS, IREPS, Traffic survey.                                                                                                                                                  |
| CI/CP-2/1.22 | Public complaint and its disposal, Customer Care.                                                                                                                                           |
| CI/CP-2/1.23 | Contract Management, Parcel Cargo Express Train.                                                                                                                                            |
| CI/CP-2/1.24 | Any other new policy, circulars issued time to time.                                                                                                                                        |

| CI/CP-2/2    | ADVANCE GOODS THEORY                                                                                                                            |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| CI/CP-2/2.1  | Function of IRCA, Theory of Rates.                                                                                                              |
| CI/CP-2/2.2  | <b>Claims</b> : Organisation, settlement of claims and its power, decentralisation of claims, RCT.                                              |
| CI/CP-2/2.3  | Railway Rates Tribunal. Hierarchy of courts in case of claims.                                                                                  |
| CI/CP-2/2.4  | Electronic Registration of demand, Embedded empties and underloads.                                                                             |
| CI/CP-2/2.5  | Siding – opening of assisted siding and, policy on private siding, siding charges, Liberalised siding rules, e-payment, e-RR, warehouse scheme. |
| CI/CP-2/2.6  | Responsibility of railway as common carrier (Section 93 to 104).                                                                                |
| CI/CP-2/2.7  | Private Freight Terminal and Automobile Freight train, PPP. Marketing & Sales Organisation.                                                     |
| CI/CP-2/2.8  | Liberalised Wagon Investment Scheme, Engine on Load (EOL) Scheme.                                                                               |
| CI/CP-2/2.9  | Container Rail Terminal, Private Container Operator.                                                                                            |
| CI/CP-2/2.10 | Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL).                                                                                  |

|              |                                                                                       |
|--------------|---------------------------------------------------------------------------------------|
| CI/CP-2/2.11 | Punitive charge, load adjustment and off load of over loading.                        |
| CI/CP-2/2.12 | Freight Incentive Schemes.                                                            |
| CI/CP-2/2.13 | Transportation Products.                                                              |
| CI/CP-2/2.14 | Rules for public auction of goods and parcels.                                        |
| CI/CP-2/2.15 | Consumer Protection Act 1986.                                                         |
| CI/CP-2/2.16 | Long Term Tariff Contract, Rail side warehouse scheme (RSWS)                          |
| CI/CP-2/2.17 | Functioning of FOIS and working on TMS. E payment                                     |
| CI/CP-2/2.18 | Merry-Go-Round and Roll-On-Roll-Off, Automobile freight train operator (AFTO) scheme. |
| CI/CP-2/2.19 | Special Freight Train Operator (SFTO), Terminal Development Scheme(TDS)               |
| CI/CP-2/2.20 | Station to Station Rates, Wagon Leasing Scheme(WLS)                                   |
| CI/CP-2/2.21 | Rail Road co-efficient.General Purpose Wagon Investment Scheme (GPWIS)                |
| CI/CP-2/2.22 | Measures and suggestion to enhance railway traffic and earning.                       |
| CI/CP-2/2.23 | Working of in motion weigh bridge and upkeeping of its paper.                         |
| CI/CP-2/2.24 | Discussion on latest circulars.                                                       |

| CI/CP-2/3    | ACCOUNTS                                                                                                                         |
|--------------|----------------------------------------------------------------------------------------------------------------------------------|
| CI/CP-2/3.1  | Station imprest.                                                                                                                 |
| CI/CP-2/3.2  | Traffic suspense - Cash in transit, Station outstanding and its clearance.                                                       |
| CI/CP-2/3.3  | Railway Budget, Classification of Expenditure, Demand for grants, funds, control over expenditure and earning, Budgetary review. |
| CI/CP-2/3.4  | Works programme under pink book, law book and mini law book.                                                                     |
| CI/CP-2/3.5  | Frauds and embezzlements in booking, reservation, parcel and goods office. Prevention from fraud.                                |
| CI/CP-2/3.6  | Statutory audit and accounts audit.                                                                                              |
| CI/CP-2/3.7  | Kinds of tender, e-tendering and procedure of e-tendering, execution of work, GCC, SOP                                           |
| CI/CP-2/3.8  | Kinds of contract, Arbitration.                                                                                                  |
| CI/CP-2/3.9  | Withdrawal from station earning.                                                                                                 |
| CI/CP-2/3.10 | Station Balance sheet - Coaching and Goods.                                                                                      |

| CI/CP-2/4    | TRANSPORTATION                                                                                                                                                                                                                                                                                                                            |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CI/CP-2/4.1  | General understanding about GR and SR, their issuing authority, Important relevant Definitions, Classification of stations.                                                                                                                                                                                                               |
| CI/CP-2/4.2  | Duties of Railway men for securing safety.                                                                                                                                                                                                                                                                                                |
| CI/CP-2/4.3  | Brief idea about various Signals, their descriptions, minimum equipment of signals at each class of stations, Defective signals and authority to pass, Detonators and their use, brief idea about various boards, Elementary idea of interlocking & isolation, Hand signal - Exchange of signals between driver, Guard and station staff. |
| CI/CP-2/4.4  | Speed of trains, Standard Time, Running Time, Working Time Table.                                                                                                                                                                                                                                                                         |
| CI/CP-2/4.5  | Marshalling order, Loading of vehicles, standard moving dimension, ODC/ ISMD and its movement, Damaged and defective vehicles, Hot Axle vehicle.                                                                                                                                                                                          |
| CI/CP-2/4.6  | Shunting, Control of shunting, precautions during shunting of wagons containing explosive, inflammable and dangerous goods, speed of shunting, responsibility for shunting.                                                                                                                                                               |
| CI/CP-2/4.7  | Protection of trains.                                                                                                                                                                                                                                                                                                                     |
| CI/CP-2/4.8  | Brief idea of various Systems of working.                                                                                                                                                                                                                                                                                                 |
| CI/CP-2/4.9  | Idea about LC and LC Gate, Working of lorries, trolleys and motor trolleys.                                                                                                                                                                                                                                                               |
| CI/CP-2/4.10 | Line capacity, Through put, WTT, Punctuality, WTR, Wagon pool, Wagon census.                                                                                                                                                                                                                                                              |
| CI/CP-2/4.11 | <b>Planning</b> - Significance and types of planning, planning procedure, planning for increasing the line capacity, planning for yard remodelling, ESP, SIP, DPR.                                                                                                                                                                        |

| CI/CP-2/5    | ESTABLISHMENT, MANAGEMENT & WORK STUDY                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CI/CP-2/5.1  | Leave - their kinds and rules, Leave encashment Rule.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CI/CP-2/5.2  | Passes - their kinds, Rules and eligibility.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| CI/CP-2/5.3  | Pay & Allowances - Entitlements, Rules regarding TA, DA, Night Duty Allowance, Overtime and their curtailment, Contingency charges and Composite Transfer Grant.                                                                                                                                                                                                                                                                                                                                           |
| CI/CP-2/5.4  | Main provisions of Railway Service Conduct Rules                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| CI/CP-2/5.5  | Duty Roster - Description and classification, statutory provisions, periodical rest, long-on, short-off, split shift, penalty for violation of HWPR, Job analysis procedure.                                                                                                                                                                                                                                                                                                                               |
| CI/CP-2/5.6  | RTI, Pension and gratuity, NPS, relevant factors and calculation, benefits, disposal of dues by Society Bank in case of employee's death                                                                                                                                                                                                                                                                                                                                                                   |
| CI/CP-2/5.7  | D& AR – Brief Introduction-Standard Forms, Provision under Discipline and Appeal Rule 1968, Definition of various authorities, suspension, Defence Counsellor, Principle of natural justice, speaking orders, procedure for imposition of minor and major penalty, appeal, revision and review, special attention on provision under section 14(4), NIP, facilities during suspension period. How to Conduct an Enquiry.                                                                                   |
| CI/CP-2/5.8  | Workmen Compensation Act 1923, Payment and Wages Act 1936, Industrial Dispute Act 1947, PNM, JCM, PREM, RTI, SBF, Disability act 2012 and 1995, Confidential Report (APAR).                                                                                                                                                                                                                                                                                                                                |
| CI/CP-2/5.9  | <b>Management:</b><br>Introduction of management, object and types of management.<br>Quality of a manager, management process, leadership.<br>Forecasting and organisation, controlling and direction, communication and co-ordination, staff management and motivation.                                                                                                                                                                                                                                   |
| CI/CP-2/5.10 | <b>Work study:</b><br>Definition, types of work study and its aim, objectives, uses and advantages, techniques of work study, work study technique adopted by Railway, qualification and quality of work study man, work study organisation in Railway Board and HQ level,<br>Production and productivity, method study, recording technique of method study, work measurement, techniques of works measurement,<br>Production study, random sampling, synthesis, PMTS, analytical estimating, PERT chart. |

| CI/CP-2/6   | STORE                                                                                                                              |
|-------------|------------------------------------------------------------------------------------------------------------------------------------|
| CI/CP-2/6.1 | Organisation of Store department,                                                                                                  |
| CI/CP-2/6.2 | Indenting procedure, Returned Store, Procedure of DS-8.                                                                            |
| CI/CP-2/6.3 | Inventory control (ABC analysis), Dead stock register and Stock Sheet.                                                             |
| CI/CP-2/6.4 | Functions - Indenting, Accountal, Disposal of Consumable & Non consumable stores, T&P items, Various Books & Forms, Petty repairs. |

| CI/CP-2/7   | STATISTICS                           |
|-------------|--------------------------------------|
| CI/CP-2/7.1 | Brief idea about railway statistics. |
| CI/CP-2/7.2 | Commercial statistics.               |
| CI/CP-2/7.3 | Operating Statistics.                |
| CI/CP-2/7.4 | Financial Statistics.                |

| CI/CP-2/7 Safety Management |                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CI/CP-2/7.1                 | <b>Accident :</b><br>Various important definitions, classification of accident, Chain of command during accident, running of ART/ARME, Hooter, Target time of ART/ARME, Duties of Sr. DCM/DCM, Duties of Sr. Commercial Supervisor/Inspector at the time of accident, Accident enquiries.<br>Section 123 to 129, Ex-gratia payment, Compensation.                |
| CI/CP-2/7.2                 | <b>Disaster Management</b> – Introduction, Various Organizations, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance.                                                                                                                                                           |
| CI/CP-2/7.3                 | <b>First Aid</b> – (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs.<br>Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half Day Hands on Practice. |
| CI/CP-2/7.4                 | <b>Fire Fighting</b> – Theory & Demonstration, Civil defence.<br>Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire.<br>Half Day Hands on Practice.                                                                                                            |

| CI/CP-2/8 ETHICAL LEADERSHIP & SOFT SKILLS |                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CI/CP-2/8.1                                | Ethics – Meaning, Role, Need, Value and Importance in public life.                                                                                                                                                                                                                                       |
| CI/CP-2/8.2                                | Leadership – Meaning, Role, Need, Value and Importance, Team building, Crowd/Mob Management.                                                                                                                                                                                                             |
| CI/CP-2/8.3                                | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Telephone etiquette, Body language basics, Patience, Brain Storming, Perception. Forgiveness, Case studies/ inspirational videos.                                                 |
| CI/CP-2/8.4                                | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life.<br>Crisis management in Booking/PRS/Parcel offices in handling of heavy rush, handling acute shortage of staff, failure of computer systems, thin clients, and communication equipments, printers. |
| CI/CP-2/8.5                                | Customer care - Public perception, public relations, courtesy, Customer service its importance and provision.                                                                                                                                                                                            |
| CI/CP-2/8.6                                | Soft Skills – Meaning, Requirements and its importance in public life.                                                                                                                                                                                                                                   |
| CI/CP-2/8.7                                | Yoga, PT, Meditation and Shramdan.                                                                                                                                                                                                                                                                       |
| CI/CP-2/8.8                                | Sports                                                                                                                                                                                                                                                                                                   |

| CI/CP-2/9 INFORMATION TECHNOLOGY |                                                                                                                                                             |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CI/CP-2/9.1                      | Computerization in Indian Railways                                                                                                                          |
| CI/CP-2/9.2                      | Basic Knowledge of Computers(Word, Excel, Power Point), means of Social Media and their uses                                                                |
| CI/CP-2/9.3                      | FOIS, RMS, TMS, HHT, PMS, ICMS, UTS, PRS, NTES, RBS, IREPS, IRPSM, IRMMS, IPAS and other IT applications on Indian Railways - an overview, Mobile ticketing |
| CI/CP-2/9.4                      | GEM, Feeding of station in UTS etc.                                                                                                                         |
| CI/CP-2/9.5                      | Method of accountal, generation of RR and various reports and preparation of e-Balance Sheet.                                                               |
| CI/CP-2/9.6                      | Hands on Practice.                                                                                                                                          |



| CI/CP-2/10   | Field Training          |
|--------------|-------------------------|
| CI/CP-2/10.1 | Field Training (2 Days) |

| CI/CP-2/11   | EXAMINATION                                                                                                                | Day | Hours |
|--------------|----------------------------------------------------------------------------------------------------------------------------|-----|-------|
| CI/CP-2/11.1 | <b>Paper – 1 (Advanced Coaching Theory including Practical) = Max Marks: 100</b><br>[Obj: 40 Marks; Descriptive: 60 Marks] | 1   | 3     |
| CI/CP-2/11.2 | <b>Paper – 2 (Advanced Goods Theory including Practical) = Max Marks: 100</b><br>[Obj: 40 Marks; Descriptive: 60 Marks]    | 2   | 3     |
| CI/CP-2/11.3 | <b>Paper – (Transportation and Others)</b><br>= Max Marks: 100<br>[Obj: 40 Marks; Descriptive: 60 Marks]                   | 3   | 3     |

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Refresher course for Commercial-cum-Ticket Clerks (All grades)

I/3117998/2025

| | |
|------------|--|
| Department | Commercial |
| Module No. | Com-03 |
| Category | Commercial-cum-Ticket Clerks (All grades) |
| Stage | Refresher |
| Duration | 06working days = 36 Hours |

| Module No. | Description | Hours | Days |
|------------|--|-----------|-----------|
| CR-1/1 | Coaching Theory | 06 | 01 |
| CR-1/2 | Goods Theory | 06 | 01 |
| CR-1/3 | Accounts | 03 | 0.5 |
| CR-1/4 | Safety Management | 03 | 0.5 |
| CR-1/5 | Information Technology | 06 | 01 |
| CR-1/6 | Ethical Leadership & Stress Management | 06 | 01 |
| CR-1/7 | Examination | 06 | 01 |
| | TOTAL | 36 | 06 |

This is applicable for all the combined cader in lower grades (other than Inspectors and Supervisors) and will be mandatory for every 2 years.

| CR-1/1 COACHING THEORY | |
|---|--|
| Detailed discussion on latest changes and recapitulation of the following topics :- | |
| CR-1/1.1 | Booking Office – Brief discussion on existing Break Journey Rule, Break Journey on various kinds of tickets and passes, Circular Journey, JTBS & STBA, YTSK, NGeT, Group reservation and Charting, kinds of time table and their use. Telephone no. 138, 139 & 182, Various kinds of concessions. |
| CR-1/1.2 | Reservation Office - Rules for reservation of seats/berths, compartment, coach/tourist car, Special trains, various reservation quotas, RAC, Tatkal Seva, group reservation, change in name of reservation, preponement & postponement of reservation, Up gradation scheme, Refund of fare rules, issue of duplicate ticket in case of original is lost/torn/mutilated, issue of TDR & EDR. |
| CR-1/1.3 | Parcel - Rules for acceptance, booking and carriage of parcels as per Coaching Tariff., categorisation (R,P,S) of trains for the purpose of booking of parcel, Fording Note and its execution, Rules for booking and carriage of 2, 3 and 4 wheeled carriages such as bicycle, scooter, motorcycle etc. in Luggage and Parcel and minimum weight condition, percentage charge, Booking and charging of animals and birds, News Paper & Magazines. |
| CR-1/1.4 | Luggage – Definition, articles not accepted as luggage, articles allowed free and not weighed, Free Allowance, Grace Limit, Compartment Limit, cases in which free allowance not given, Carriage of luggage with passenger in passenger compartment and in Brake Van, Charging of unbooked luggage and partially booked luggage. |
| CR-1/1.5 | Ticket Checking - Object of checking and collection of tickets, Submission of Ticket Collector's Report. Special points to be kept in view during checking, Various cases of irregular travelling and charging of excess fare and excess charge, Left behind tickets. |
| CR-1/1.6 | Rly. Act 1989 – Sec. 49 to 60 and cognisable and non-cognisable offences under sections 137 to 149, 155 to 157, 162 to 167, 172 & 198. |
| CR-1/1.7 | Guard Certificate – persons authorised to issue, conditions and circumstances under which issued and procedure of issue. |
| CR-1/1.8 | Public Grievance Redressal organisation, public complaints and their disposal, Computerisation of complaints. |
| CR-1/1.9 | Disposal of Booked and unclaimed, unbooked and unclaimed and unconnected goods, NR Cell, transit time, overdue consignment, over carried consignment. |

| CR-1/2 GOODS THEORY | |
|---|--|
| Detailed discussion on latest changes and recapitulation of the following topics :- | |
| CR-1/2.1 | Forwarding Note, its execution and importance, various types of Forwarding Notes and their use. |
| CR-1/2.2 | Briefing about Preferential traffic schedule, wagon demand, indent, allotment and supply of wagons. |
| CR-1/2.3 | Wagon Demand Register, placement of wagons at goods shed, Wagon Transfer Register, loading of out ward goods, Out ward tally book. |
| CR-1/2.4 | Kinds of rates, classification of commodities, block rake composition. |
| CR-1/2.5 | Rules for acceptance, booking and carriage of contraband goods, intoxicating drugs, dangerous and offensive goods. |
| CR-1/2.6 | Rules for acceptance, booking carriage and delivery of live stock and Bulky articles. |

| | |
|-----------|---|
| CR-1/2.7 | Rules for acceptance, booking carriage and delivery of Railway Material and Military Goods. |
| CR-1/2.8 | Rules for booking block rake, TMS, e-payment. |
| CR-1/2.9 | Unloading of wagons, reporting discrepancies and maintenance of DD register. Reweighment of goods, Punitive charges for overloading of goods, Inward tally book, Inward invoice index register, Under charge, Over charge, Over charge sheet, Inventory of goods. |
| CR-1/2.10 | Delivery of Goods. Various types of delivery. Delivery in the absence of RR. Indemnity bond - Their types and execution. Gate pass system. Preparation & Submission of DR/MGR. |
| CR-1/2.11 | Rebooking and Diversion. |
| CR-1/2.12 | Disposal of Booked & unclaimed, Unconnected goods and Lost Property. NR cell and its functions. |
| CR-1/2.13 | Cause of claims and their prevention. Organization of claims and refunds. Procedure for settlement of claims. |
| CR-1/2.14 | Wharfage & Demurrage Rules. |

| CR-1/3 | ACCOUNTS |
|----------|---|
| CR-1/3.1 | Indent of Money Value Book, Indent & estimate of computer tickets, Emergent Indent, Red Signal. |
| CR-1/3.2 | DTC book, Remittance of cash through CR Note/Bank. |
| CR-1/3.3 | Various reports (Passenger Classification Return, EFT Return, BPT Return, ROPD, Advance Statement of Gross Earning etc.) submitted by booking, reservation and TC office. |
| CR-1/3.4 | Accountal of EFT, BPT, RTC, NIT and various vouchers. |
| CR-1/3.5 | Disposal of collected tickets, Returns of TC/TTE. |
| CR-1/3.6 | DTCR (Daily Train Collection Report), Abnormal Tickets and their DTCR. |
| CR-1/3.7 | Non issued ticket, obsolete tickets and their disposal. |
| CR-1/3.8 | Station outstanding and their clearance, Debit register, Error schedule. |

| CR-1/4 | SAFETY MANAGEMENT |
|----------|--|
| CR-1/4.1 | Accident :
Various important definitions, classification of accident, Chain of command during accident, running of ART/ARME, Hooter, Target time of ART/ARME, Duties of Sr. Commercial Supervisor at the time of accident, Ex-gratia payment, Compensation, Section 123 to 129. |
| CR-1/4.2 | Disaster Management – Introduction, Various Organizations, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance. |
| CR-1/4.3 | First Aid – (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs.
Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half Day Hands on Practice. |
| CR-1/4.4 | Fire Fighting – Theory & Demonstration, Civil defence.
Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire.
Half Day Hands on Practice. |

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| CR-1/5 | INFORMATION TECHNOLOGY |
|----------|--|
| CR-1/5.1 | FOIS, RMS, TMS, PMS, ICMS, UTS, PRS, NTES, RBS etc an overview |
| CR-1/5.2 | Various reports and preparation of e-Balance Sheet. |
| CR-1/5.3 | Hands on Practice, trouble shooting and problem solving. |

| CR-1/6 | ETHICAL LEADERSHIP & STRESS MANAGEMENT |
|----------|---|
| CR-1/6.1 | Ethics – Meaning, Role, Need, Value and Importance in public life. |
| CR-1/6.2 | Leadership – Meaning, Role, Need, Value and Importance, Team building, Crowded/Mob Management. |
| CR-1/6.3 | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience, Brain Storming, Perception. Forgiveness, Case studies/ inspirational videos. |
| CR-1/6.4 | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life. |
| CR-1/6.5 | Customer care - Public perception, public relations, courtesy, Customer service its importance and provision. |
| CR-1/6.6 | Soft Skills – Meaning, Requirements and its importance in public life. |
| CR-1/6.7 | Yoga, PT, Meditation and Shramdan. |
| CR-1/6.8 | Sports |

| CR-1/7 | EXAMINATION | Day | Hours |
|----------|--|-----|-------|
| CR-1/7.1 | Paper – 1 (Commercial) = Max Marks: 100 | 1 | 3 |

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## Training Module for Commercial Supervisors & Inspectors Refresher

|            |                                              |
|------------|----------------------------------------------|
| Department | <b>Commercial</b>                            |
| Module No. | <b>CR-2</b>                                  |
| Category   | <b>Commercial Supervisors and Inspectors</b> |
| Stage      | <b>Refresher</b>                             |
| Duration   | <b>06 Working Days / 36 Hours</b>            |

| Module No. | Description                            | Hours     | Days      |
|------------|----------------------------------------|-----------|-----------|
| CR-2/1     | Commercial Theory                      | 06        | 01        |
| CR-2/2     | Information Technology                 | 06        | 01        |
| CR-2/3     | Accounts                               | 03        | 0.5       |
| CR-2/4     | Establishment                          | 03        | 0.5       |
| CR-2/5     | Safety Management                      | 06        | 01        |
| CR-2/6     | Ethical Leadership & Stress Management | 06        | 01        |
| CR-2/7     | Examination Coaching theory            | 06        | 01        |
|            | <b>TOTAL</b>                           | <b>36</b> | <b>06</b> |

**This is applicable to staff working as Inspectors /Supervisory cadres and will be mandatory for every 2 years.**

| CR-2/1                                                                              |                                                                                                                                                                        | COMMERCIAL THEORY |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Detailed discussion on latest changes and recapitulation of the following topics :- |                                                                                                                                                                        |                   |
| CR-2/1.1                                                                            | General Rules of Booking, Conveyance & delivery of Luggage, Parcels & Goods Traffic. Rules regarding Ticketing and ticketless/irregular travel. PPM and special train. |                   |
| CR-2/1.2                                                                            | Theory of Rates and its salient features.                                                                                                                              |                   |
| CR-2/1.3                                                                            | Passenger fare structure and freight structure of luggage, parcel and goods.                                                                                           |                   |
| CR-2/1.4                                                                            | Categorization of stations for the purpose of amenities, Passenger Amenities – Minimum, Essential, Recommended and Desirable Amenities , model stations.               |                   |
| CR-2/1.5                                                                            | Causes of ticket less travelling and different kinds of checks. Causes of irregularity, leakage of revenue and frauds.                                                 |                   |
| CR-2/1.6                                                                            | Catering policy - 2017.                                                                                                                                                |                   |
| CR-2/1.7                                                                            | Policy for Water Vending machine                                                                                                                                       |                   |
| CR-2/1.8                                                                            | Policy for installation of ATM                                                                                                                                         |                   |
| CR-2/1.9                                                                            | Book Stall Policy, Multi Purpose Stall.                                                                                                                                |                   |
| CR-2/1.10                                                                           | Commercial advertisement in trains and at stations. OHA, Mobile asset, Rail Display Network, Non-Fare Revenue.                                                         |                   |
| CR-2/1.11                                                                           | Cleanliness at stations and in trains, Pay & Use Toilets.                                                                                                              |                   |
| CR-2/1.12                                                                           | Cycle, Motor cycle, Scooter and Car parking.                                                                                                                           |                   |
| CR-2/1.13                                                                           | Passenger Information System                                                                                                                                           |                   |
| CR-2/1.14                                                                           | Parcel Management System.                                                                                                                                              |                   |
| CR-2/1.15                                                                           | Leasing of SLR and VPU.                                                                                                                                                |                   |
| CR-2/1.16                                                                           | Railway Act. Section 123 to 129 regarding railway liability in rail accident and untoward incidents, Payment of Ex-gratia and compensation.                            |                   |
| CR-2/1.17                                                                           | Railway Users Consultative Committees and Council.                                                                                                                     |                   |
| CR-2/1.18                                                                           | Inspections, definitions and their objects, inspections of stations, Parcel office, Booking office, Reservation office, Goods shed and catering service.               |                   |
| CR-2/1.19                                                                           | Duties of Dy. SS (Commercial), Commercial Inspector and Supervisors.                                                                                                   |                   |
| CR-2/1.20                                                                           | RTI Act 2005.                                                                                                                                                          |                   |
| CR-2/1.21                                                                           | Opening and closing of Halt Station.                                                                                                                                   |                   |
| CR-2/1.22                                                                           | ICMS, IRPSM, IRMMS, IREPS, Traffic survey.                                                                                                                             |                   |
| CR-2/1.23                                                                           | Public complaint and its disposal, Customer Care.                                                                                                                      |                   |
| CR-2/1.24                                                                           | Contract Management, Parcel Cargo Express Train.                                                                                                                       |                   |
| CR-2/1.25                                                                           | Function of IRCA, Theory of Rates.                                                                                                                                     |                   |
| CR-2/1.26                                                                           | <b>Claims</b> : Organisation, settlement of claims and its power, decentralisation of claims, RCT.                                                                     |                   |
| CR-2/1.27                                                                           | Railway Rates Tribunal.                                                                                                                                                |                   |
| CR-2/1.28                                                                           | Electronic Registration of demand, Embedded empties and underloads.                                                                                                    |                   |
| CR-2/1.29                                                                           | Siding – opening of assisted siding and, policy on private siding, siding charges, Liberalised siding rules, e-payment, e-RR, warehouse scheme.                        |                   |
| CR-2/1.30                                                                           | Responsibility of railway as common carrier (Section 93 to 104).                                                                                                       |                   |
| CR-2/1.31                                                                           | Private Freight Terminal and Automobile Freight train, PPP. Marketing & Sales Organisation.                                                                            |                   |
| CR-2/1.32                                                                           | Liberalised Wagon Investment Scheme, Engine on Load (EOL) Scheme.                                                                                                      |                   |
| CR-2/1.33                                                                           | Container Rail Terminal, Private Container Operator.                                                                                                                   |                   |
| CR-2/1.34                                                                           | Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL).                                                                                                         |                   |
| CR-2/1.35                                                                           | Punitive charge, load adjustment and off load of over loading.                                                                                                         |                   |

|           |                                                                 |
|-----------|-----------------------------------------------------------------|
| CR-2/1.36 | Freight Incentive Schemes.                                      |
| CR-2/1.37 | Transportation Products.                                        |
| CR-2/1.38 | Rules for public auction of goods and parcels.                  |
| CR-2/1.39 | Consumer Protection Act 1986.                                   |
| CR-2/1.40 | Long Term Tariff Contract                                       |
| CR-2/1.41 | Functioning of FOIS and working on TMS. E payment               |
| CR-2/1.42 | Merry-Go-Round and Roll-On-Roll-Off                             |
| CR-2/1.43 | Special Freight Train Operator (SFTO)                           |
| CR-2/1.44 | Station to Station Rates                                        |
| CR-2/1.45 | Rail Road co-efficient.                                         |
| CR-2/1.46 | Measures and suggestion to enhance railway traffic and earning. |
| CR-2/1.47 | Working of in motion weigh bridge and upkeeping of its paper.   |

| CR-2/2   | ACCOUNTS                                                                         |
|----------|----------------------------------------------------------------------------------|
| CR-2/2.1 | General discussion on various Accounts matters, latest circulars and case study. |

| CR-2/3                                                                                     | ESTABLISHMENT                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Detailed discussion on latest changes and recapitulation of the following topics :-</b> |                                                                                                                                                                                                                                                                                                                                                                                                                          |
| CR-2/3.1                                                                                   | Leave, Passes, Pay & Allowances, HWPR, NPS.                                                                                                                                                                                                                                                                                                                                                                              |
| CR-2/3.2                                                                                   | Main provisions of Railway Service Conduct Rules, Confidential Report (APAR).                                                                                                                                                                                                                                                                                                                                            |
| CR-2/3.3                                                                                   | Workmen Compensation Act 1923, Payment and Wages Act 1936, Industrial Dispute Act 1947, PNM, JCM, PREM, RTI, SBF, Disability act 2012 and 1995,                                                                                                                                                                                                                                                                          |
| CR-2/3.4                                                                                   | D& AR – Brief Introduction-Standard Forms, Provision under Discipline and Appeal Rule 1968, Definition of various authorities, suspension, Defence Counsellor, Principle of natural justice, speaking orders, procedure for imposition of minor and major penalty, appeal, revision and review, special attention on provision under section 14(4), NIP, facilities during suspension period. How to Conduct an Enquiry. |

| CR-2/4   | SAFETY MANAGEMENT                                                                                                                                                                                                                                                                                                                                                |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CR-2/4.1 | <b>Accident :</b><br>Various important definitions, classification of accident, Chain of command during accident, running of ART/ARME, Hooter, Target time of ART/ARME, Duties of Sr. DCM/DCM, Duties of Sr. Commercial Supervisor/Inspector at the time of accident, Accident enquiries.<br>Section 123 to 129, Ex-gratia payment, Compensation.                |
| CR-2/4.2 | <b>Disaster Management</b> – Introduction, Various Organizations, Golden Hour, DM Plans – at Divisional & Zonal levels, Various Telephone Nos. of Authorities to be used in requirement of assistance.                                                                                                                                                           |
| CR-2/4.3 | <b>First Aid</b> – (Theory & Practical) Aims and Objective of First Aid, Respiration, Fractures, Poisons, Injuries to internal Organs.<br>Principles of First Aid, Brief description of the structure and functions of the body. General description of heart and vessels. Circulation of blood. Heart attack, Blood pressure & CVS. Half Day Hands on Practice. |
| CR-2/4.4 | <b>Fire Fighting</b> – Theory & Demonstration, Civil defence.<br>Types of fire, causes of fire in train and at station, types of fire extinguisher, upkeep/readiness and use of fire extinguisher. Prevention of fire.<br>Half Day Hands on Practice.                                                                                                            |



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| CR-2/5   | INFORMATION TECHNOLOGY                                                                                                                     |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------|
| CR-2/5.1 | Computerization in Indian Railways                                                                                                         |
| CR-2/5.2 | Basic Knowledge of Computers, means of Social Media and their uses                                                                         |
| CR-2/5.3 | RBS, FOIS, RMS, TMS, HHT, PMS, ICMS, UTS, PRS, NTES, SATSANG and other IT applications on Indian Railways - an overview, Mobile ticketing. |
| CR-2/5.4 | Method of accountal, generation of RR and various reports and preparation of e-Balance Sheet.                                              |
| CR-2/5.5 | Hands on Practice.                                                                                                                         |

| CR-2/6   | ETHICAL LEADERSHIP & SOFT SKILL                                                                                                                                                                               |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CR-2/6.1 | Ethics – Meaning, Role, Need, Value and Importance in public life.                                                                                                                                            |
| CR-2/6.2 | Leadership – Meaning, Role, Need, Value and Importance, Team building, Crowded/Mob Management.                                                                                                                |
| CR-2/6.3 | Personality Development - Meaning, Need and Importance. Positive Attitude Development, Effective communication Skills, Patience, Brain Storming, Perception. Forgiveness, Case studies/ inspirational videos. |
| CR-2/6.4 | Stress Management - Meaning, Causes, Symptoms, remedies importance in personal and professional life.                                                                                                         |
| CR-2/6.5 | Customer care - Public perception, public relations, courtesy, Customer service its importance and provision.                                                                                                 |
| CR-2/6.6 | Soft Skills – Meaning, Requirements and its importance in public life.                                                                                                                                        |
| CR-2/6.7 | Yoga, PT, Meditation and Shramdan.                                                                                                                                                                            |
| CR-2/6.8 | Sports                                                                                                                                                                                                        |

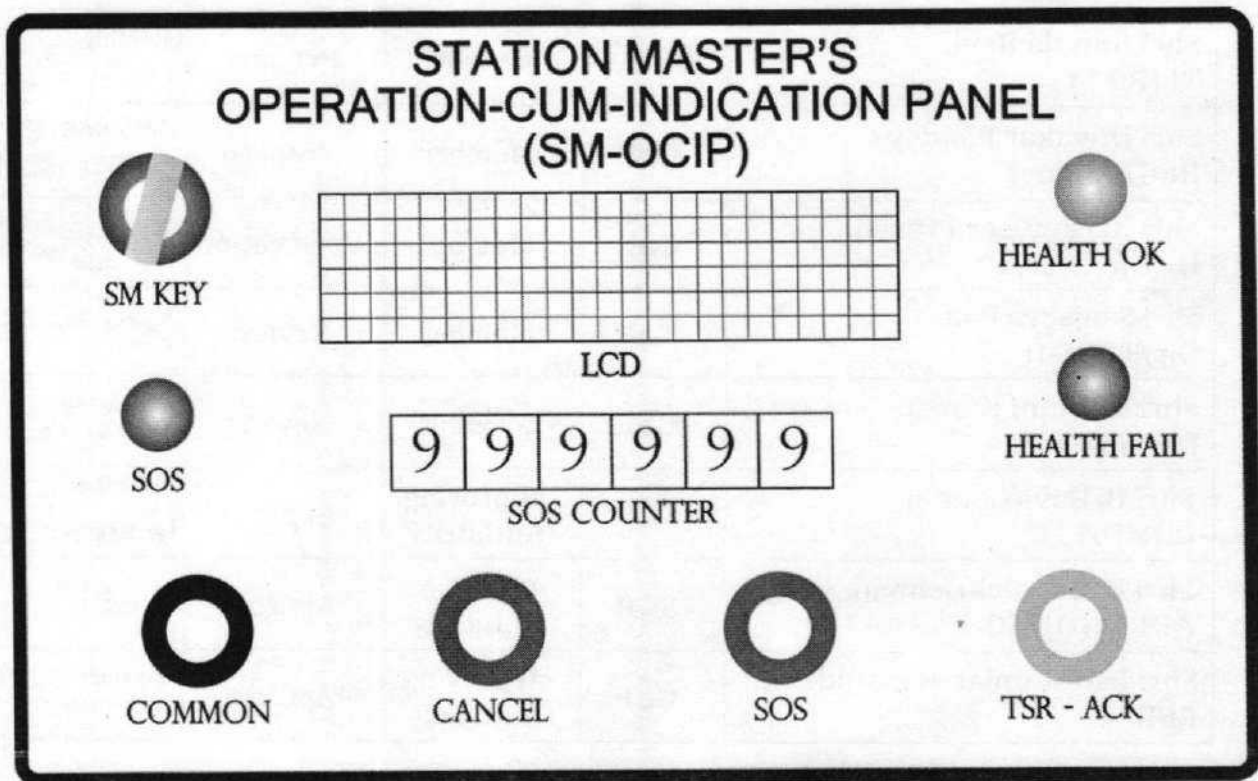
| CR-2/7   | EXAMINATION                                    | Day | Hours |
|----------|------------------------------------------------|-----|-------|
| CR-2/7.1 | <b>Paper – 1 (Commercial)</b> = Max Marks: 100 | 1   | 3     |

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Kavach

Indian Railway's

Automatic Train Protection System (IR-ATP)



CoE/Kavach/2024/008 Issue 2.0

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Notes:

- (a) There is mention of TSR related button available on SM-OCIP, however, the Temporary Speed Restrictions (TSR) related procedures will be included on incorporation of TSR functionality progressively.
- (b) The document might also be required to be updated on approval of G&SR Committee Report.
- (c) Some gaps have been observed among Functional Requirement Specifications of Kavach and the logics implemented, which are under trials. The prominent among them is related to appearance of On Sight Mode without ensuring locking of route. Unlike Kavach Ver 3.2, On Sight Mode is appearing quite frequently in Kavach Ver 4.0, and might have implications on operations in form of misleading indications on Loco Pilots- Operation-cum-Indication Panel. The matter has been referred to RDSO, and is under review, the response is awaited from RDSO. The document will be updated as per decision of RDSO.

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Acronyms

| Acronym | Explanation |
|---------|---|
| ACK | Acknowledgement |
| ATP | Automatic Train Protection |
| BIU | Brake Interface Unit |
| CPU | Central Processing Unit |
| DAY | 07:00 to 19:00 Hours |
| DMI | Driver Machine Interface |
| EB | Emergency Brake |
| EoA | End of Authority |
| EVL | Event Logger Card |
| GEN | Generate |
| GPS | Global Positioning System |
| GSM | Global System for Mobile Communications |
| GPRS | General Packet Radio Service |
| IRSEM | Indian Railways Signal Engineering Manual |
| Kavach | Indian Railways' Automatic Train Protection (ATP) system, previously known as the cab signaling based Train Collision Avoidance System (TCAS) |
| KMS | Key Management System |
| LCD | Liquid Crystal Display |
| LED | Light Emitting Diode |
| LP-OCIP | Loco Pilot's Operation Cum Indication Panel |
| LTE | Long-Term Evolution |
| MA | Movement Authority |
| NIGHT | 19:00 to 07:00 Hours |
| NMS | Network Monitoring System |
| PSR | Permanent Speed Restriction |
| RFID | Radio Frequency Identification |
| RF | Radio Frequency |
| RIU | Remote Interface Unit |
| SIL | Safety Integrity Level |
| SM | Station Master |
| SM-OCIP | Station Master Operation Cum Indication Panel |
| SOS | Save Our Souls |
| SPAD | Signal Passing at Danger |
| SVK | Stationary Vital Kavach |
| TCAS | Train Collision Avoidance System |
| TSR | Temporary Speed Restriction |
| TSRMS | Temporary Speed Restriction Management System |
| UHF | Ultra-High Frequency |

Course Content

The following are the broad topics in this module on Kavach System for Traffic Staff viz...

- Traffic Inspectors
- Station Masters
- Train Managers
- Section Controllers

| S. No | Topic |
|-------|---|
| 1 | Introduction to Kavach |
| 2 | Station Master Operation Cum Indication Panel (SM-OCIP) |
| 3 | Operational Modes of Onboard Kavach for Version 4.0 |
| 4 | General Guidelines for Kavach |

1. Introduction

Indian Railways has developed its own indigenous Automatic Train Protection (ATP) Systems for enhancing safety of running trains. The system was formerly known as Cab-signalling Train Collision Avoidance System (TCAS) which is now called as 'Kavach'. It has been adopted as our Automatic Train Protection (ATP) System in line with Atma Nirbhar Bharat mission.

Kavach is being provided on sections equipped with Multi Aspect Colour Light Signalling controlled by relay or electronic interlocking. It will be an additional aid to the Loco Pilot and hence, Loco Pilot shall continue to follow prevalent operating and safety rules.

For train speeds beyond 140 KMPH, Automatic Train Protection (ATP) System with Cab Signaling for SPAD mitigation is compulsory in Indian Railways as per Para 7.8.9, table-3 of IRSEM. Based on the Railway Board instructions of date 09.08.2024, Kavach system is getting proliferated in its current RDSO specification - Version 4.0 of Kavach on UHF spot frequencies (MComm) without waiting for LTE. Some of the features like LTE, Temporary Speed Restriction Management System (TSRMS), Neutral Section and Fouling Mark protection will be implemented progressively. The information and procedures about upcoming TSRMS will be included after finalization for field installations.

This training module has been meticulously designed based on the RDSO specification No. RDSO/SPN/196/2020, Version 4.0 (Functional Requirement Specification dated 11.04.2022, System Requirement Specification 16.07.2024, first Product approval awaited) to equip Traffic Staff with the essential knowledge and skills required to understand the Kavach system of working. It intends to achieve effective operations pertaining to Traffic Staff, and ensure the optimal performance of the systems in their professional duties. In today's rapidly advancing technological landscape, the ability to swiftly and properly operate the system is critical in enhancing operational safety. This module is expected to serve both a guide and a resource to help to achieve these goals.

The training module covers a wide range of topics, including:

- Familiarizing with the various sub systems of Kavach.
- Working of Station Master Operation Cum Indication Panel (SM-OCIP).
- Various Operational Modes of Onboard Kavach for Version 4.0.
- General Guidelines.

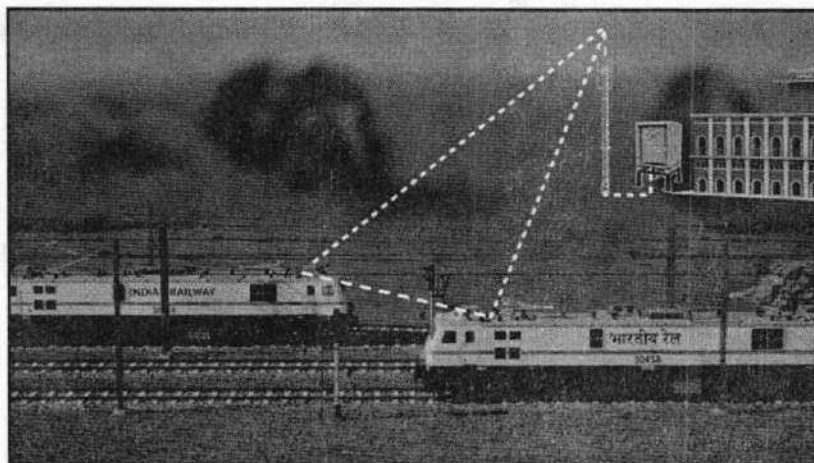
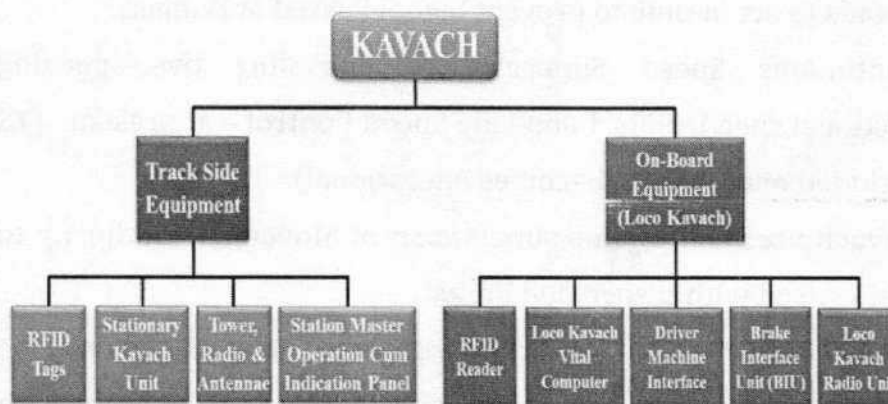
2. Kavach and its Sub Systems

2.1 Salient features of Kavach

- Kavach is only an additional safety aid to the Loco Pilot to avoid unsafe situations arising out of non-adherence to signalling indications or speed restrictions by the Loco Pilot.
- The provision of Kavach shall, in no way absolve the railway staff of their responsibilities in respect of observance and compliance of Speed restrictions and aspects of signals.
- The operation of Kavach shall, in no way infringe or override the rules pertaining to the regular or unusual train operations as mentioned in G&SR.
- Basic functions of KAVACH (These vary depending on the operational modes)
 - ✓ An additional aid to the loco pilot for mitigation of risks arising out of SPAD. It automatically applies brakes if the loco pilot violates speed restrictions or fails to act in time to prevent Signal Passed at Danger.
 - ✓ Continuous Speed Supervision: Controlling over-speeding beyond Sectional speed, PSRs, Loop Line Speed Control – at present. (TSRs will be included once TSRMS becomes operational).
 - ✓ Kavach uses continuous supervision of Movement Authority to maintain train speed within specified limits.
 - ✓ Kavach also provides protection from head-on, rear-end and side collisions by estimating track occupancy and identifying the track. This feature works only between trains with locomotives having functional on board Kavach.
 - ✓ Capable of displaying Signal Aspect of approaching signal in loco pilot's cab along with the movement authority aiding Loco Pilot.
 - ✓ Displays the section speed, permitted speed, target speed and current speed on a single dial.
 - ✓ Auto whistling at Level Crossing Gate in certain conditions.

- ✓ Kavach has broadly two categories of protections:
- Category (I): Protection against inadequate braking by Loco Pilot in his own Loco. Examples: Protection against Collisions due to SPAD, Protection against Over-speeding (Speed Restrictions, Turnouts), Protection against Rollback of Train. For such kind of protections, functional Onboard Kavach in his own Loco (defaulting) is adequate and the protections are guaranteed as claimed.
 - Category (II): Protection against unusual caused due to factors external to to his own Loco. Examples: Protection against hitting another derailed train causing infringement, Protection against routing of train inconsistent with signal aspect, Protection when SoS is generated. Such protections and their level of protection are not guaranteed. Further, some of these protections are available merely with installation of RFID tags even without station equipment and tower, owing to Direct Onboard-to-Onboard Communication feature of Kavach's existing radio communication backbone (MComm).

2.2 Components of Kavach



The Kavach System comprises of

1. Track side equipment: RFID tag, Stationary Kavach Unit, Tower, Radio & Antenna, SM Operating cum Indication panel.
2. On-board equipment (Loco Kavach): RFID reader, Loco Kavach Vital computer, LP-OCIP (Driver Machine Interface), BIU (Brake Interface Unit, Loco Kavach Radio Unit.

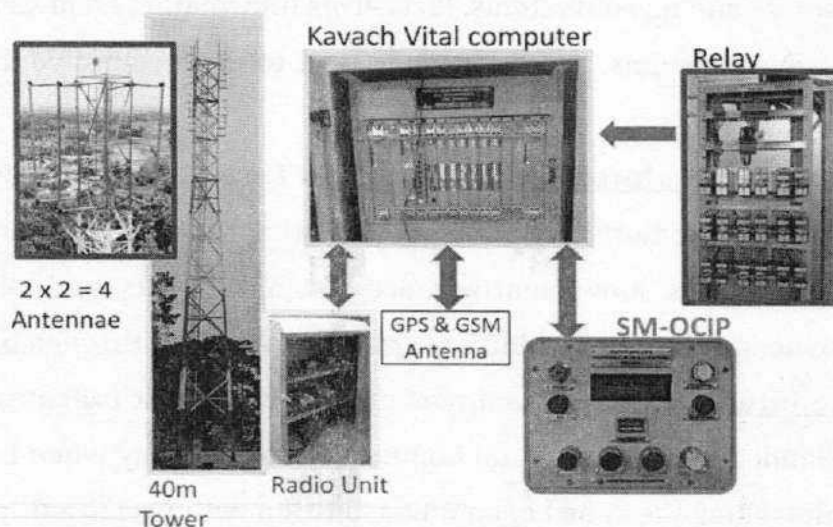
Key Components – a brief

- ✓ **RFID Tags**: Fastened to track sleepers at regular intervals, these tags transfer track information and location data to the on-board KAVACH computer.
- ✓ **Stationary Kavach Unit**: Stationary Kavach Unit is located in Relay Room/ Electronic Interlocking Room. It consists of a Vital Computer and Radio Modems, receiving information from signalling and interlocking systems and generating messages for the Onboard (Locomotive).
- ✓ **Tower, Radio and Antenna**: Towers are located at the block stations, Interlocked LC gates, IB huts and Mid-section for auto signals wherever Stationary Kavach is installed, as per need.
- ✓ **SM Operation cum Indication panel**: SMOCIP is a part of Station Kavach. It is a display unit provided to the Station Master. It is placed in SM office. It is operated by Station Master as and when necessary, like manual SOS generation etc.
- ✓ **RFID reader**: It is placed underneath the Locomotive to read the RFID tags.
- ✓ **Loco Kavach Vital Computer**: The Vital Computer interfaces with the locomotive and its subsystems. It receives information from signaling and interlocking systems, and relays messages to the locomotive through the Radio Unit.
- ✓ **Driver Machine Interface**: It is a part of Loco Kavach. DMI is a display panel in the locomotive cab that provides real-time information about the track conditions, movement authority, signal aspects, and allows LP to acknowledge warnings or initiate emergency actions through buttons.
- ✓ **Brake Interface Unit**: It is a part of Loco Kavach. It executes the brake commanded by Onboard Vital Computer automatically when Loco pilot is not controlling the speed in commensuration with permitted speed which

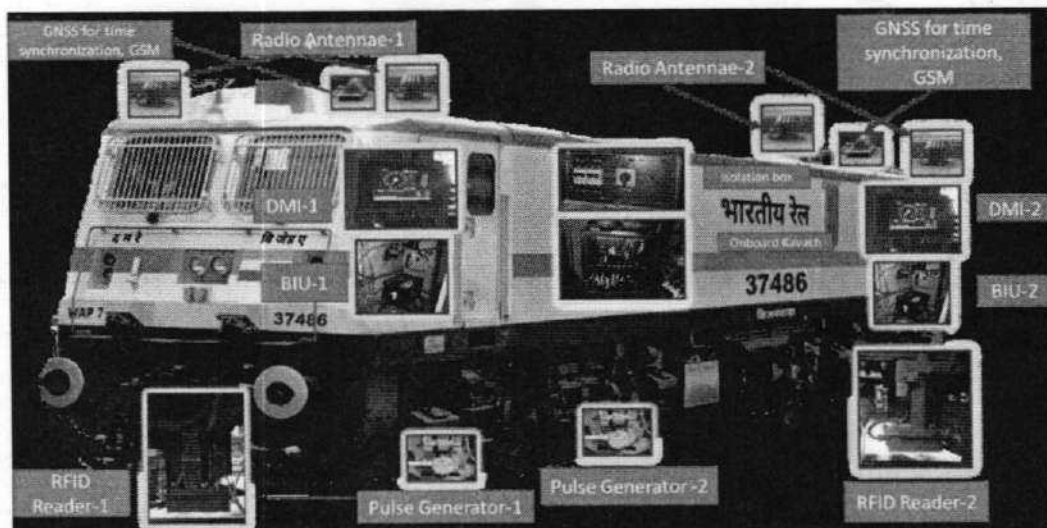
is based on signalling information including permanent speed restrictions, gradient, braking characteristics of train.

- ✓ **Loco Kavach Radio Unit:** It is fitted in the Loco. It is the onboard radio communication device that enables the Loco to receive signaling information from trackside Kavach units via radio waves. There is provision of Direct Onboard-to-Onboard Communication also in existing radio communication backbone (MComm) of Kavach.
- ✓ **Network Monitoring System (NMS):** Logs train movements, inputs, and fault messages. It automatically alerts the fault teams to address issues.
- ✓ **Key Management System (KMS):** Ensures secure exchange of Movement Authorities between Stationary Kavach and Onboard Kavach systems.
- ✓ **Kavach Communication:**
 - Radio communication network is used for the bi-directional exchange of information between Stationary Kavach and Onboard Kavach and direct Communication among Onboard to Onboard Kavach.
 - Radio communication channels are in dual arrangement which are used in alternate time cycles with separate cable and antenna for each radio, which also acts as hot standby.
 - Timeout due to radio communication failure shall be deemed to occur when 30 seconds (configurable) for Absolute Block Section and 10 seconds (configurable) for Automatic Block Section have passed since the last packet received from SKavach in the communication mandatory area.

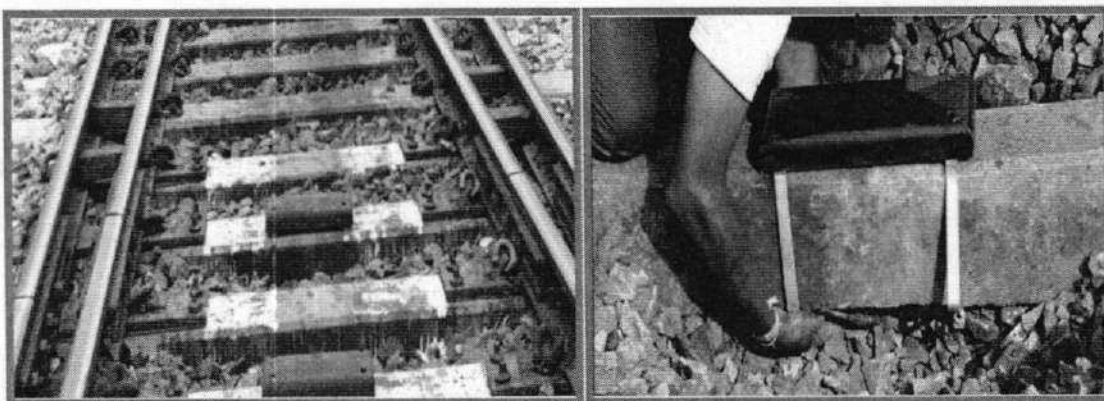
2.3 Kavach Arrangements in Station at a glance



2.4 Loco Kavach at a glance



2.4 Radio Frequency Identification (RFID) Tags

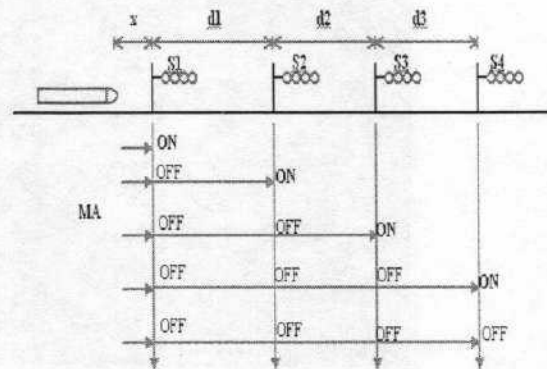


- RFID Tags are provided in station yard for each signal, signal approach and turnouts and in block section within 1000m for giving Trackside information to Loco Kavach unit.
- RFID tags shall be fixed at the center of PSC Sleepers. No holes shall be drilled in the Sleepers and the arrangement of fixing must be through clamps only.
- These RFID tags are suitable for reliable working for train speed up to 200 kmph.
- These RFID tags are able to work even when submerged in water up to rail level.

2.5 Working Principle:

Movement Authority

It is the distance up to which the train is permitted to travel safely. When deployed with lineside signals, the calculation of Movement Authority (MA), depends upon signal aspect sequence.



End of Authority (EoA)

It is the location up to which the train is permitted to proceed and where the targetspeed is zero.

Kavach system uses radio communication for exchanging information between Loco and Station, through the RF Communication towers which are located near stations, interlocked LC gates, IB huts and mid-section for auto signals. Station Kavach and Loco Kavach units communicate with each other for every 2 seconds.

Speed profiles

Kavach supervises the speed of Loco/Train based on certain parameters like Dynamic Speed Profile and Static Speed Profile.

- Dynamic Speed Profile:** the speed-distance curve which a train shall follow without violating the static train speed profile till the end of Movement Authority. This curve depends on the braking characteristics of the train and train length.
- Static Speed Profile:** it is a description of the fixed speed restriction at a resolution of 5 kmph for a part of track sent from trackside to train.

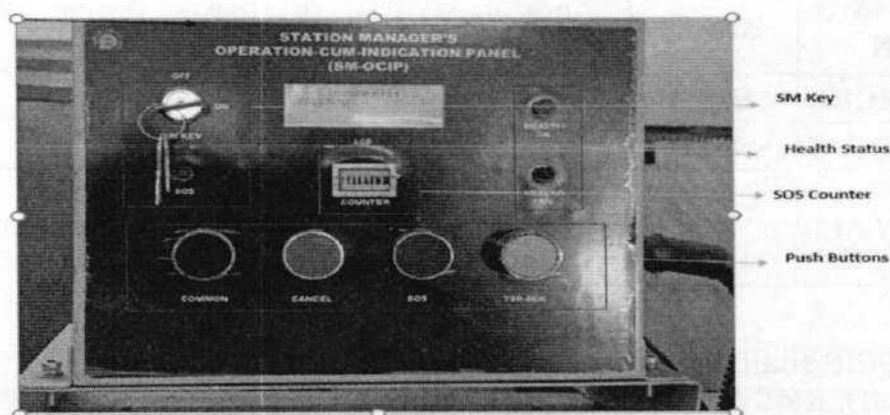
3. Station Master Operation cum Indication Panel (SM-OCIP)

3.1 Introduction to SM-OCIP

- The Station Master Operation Cum Indication Panel (SM-OCIP) is installed on Station Master's table or a nearby place such that it is accessible and visible to the Station Master.
- The system of working and Station Master's operations pertaining to Station Master Operation Cum Indication Panel (SM-OCIP) shall be incorporated in Appendix-C of Station Working Rules (SWR) of the stations which are equipped with Kavach.
- The Station Master can monitor the statuses of SOS reception, SOS generation and System health through LED indications mounted on the SM-OCIP module.
- All operations on SMOCIP can be performed only when the SM's key is inserted and turned to 'IN' position. On duty SM is responsible for operation of SM-OCIP and safe custody of keys to prevent unauthorized operation.

3.2 Provisions in Station Master Operation Cum Indication Panel

3.2.1 Following indications / buttons / buzzer are given in the SMOCIP:



Station Master's Key (with ON/OFF or IN/OUT Position)

- LCD display (4 Line x 20 characters).
- SOS indication
- Health indications (Green and Red)
- Audio Buzzer
- Three Push Buttons (Common, Cancel and SOS)
- Electromechanical non-resettable 6-digit counter for recording SOS operation.

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- g) TSR / Ack button (Ack Function currently in use, TSR Functionality for future use).

3.2.2 The various indications of the LED on the Console, what it means & action required by SM is tabulated below:

| Sl. | LED Name | Indication | What it means | Action by SM |
|-----|-------------|-------------|--|--|
| 1 | HEALTH OK | GREEN | Normal | - |
| 2 | HEALTH OK | Blank | Station Kavach Unhealthy | Inform S&T staff |
| 3 | HEALTH FAIL | RED | Station Kavach Unhealthy | Inform S&T staff |
| 4 | HEALTH FAIL | Blank | Normal | - |
| 5 | SOS | RED (blink) | When SOS generated from Station | Inform all concerned |
| | | | When SOS received from on board Kavach | Acknowledge in SMOCIP and inform all concerned |
| 6 | SOS | Blank | Normal | - |

3.2.3 The various buttons on the Console & their description for usage is tabulated below.

| Sl. | Button | Color | Description |
|-----|------------|--------|--|
| 1 | COMMO
N | BLACK | Common switch to press along with SOS/Cancel switch |
| 2 | CANCEL | BLUE | To cancel the SOS from station |
| 3 | SOS | RED | To generate SOS from Station |
| 4 | TSR / ACK | YELLOW | To acknowledge (TSR usage will be instructed later when TSRMS becomes operational) |

3.2.4 The SM-OCIP shall display the following information on LCD:

- Station ID, KMS Key Index, TSR Count (for future use) along with the Station Kavach OK or FAIL.
- Sub - System faults information and Station Kavach Manual SOS generated and Cancelled information shall be displayed and SOS messages shall disappear after 30 seconds.
- The display on LCD panel is as follows

Line-1: ID:00531 KI: XX T: XX

Line-2: SOS GENERATED,

Line-3: SOS CANCELLED

Line-4: STN Kavach OK/SYSTEM LINK FAIL

3.2.5 Audio buzzer – This will sound along with SOS LED Red blinking when

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manual SOS is generated / received along with which the counter will register next number.

3.3 Manual SOS generation/ Cancellation

- i. As soon as SM notices or receives any information/message that endangers or may endanger train movement and needs to stop a train, SM shall insert the SM's Key and turn it to 'In/ON' and press 'SOS' and 'Common' buttons simultaneously to generate the SOS.
- ii. The SOS as generated above will be communicated to all the functional Kavach locos/trains in vicinity and brakes will be applied automatically to those Onboard / Loco Kavach within a radius of 3000m from SOS generating Station Kavach to bring the train/trains to STOP DEAD (STANDSTILL).
- iii. After the train is brought to STOP DEAD (STANDSTILL), Loco Pilot shall acknowledge the SOS, for releasing the brakes. Loco Pilot shall further handle the train based on the information received from station Master. Further, train speed shall be supervised by KAVACH for 30kmph (configurable) till the train passes the originating Location of "SOS" message.
- iv. After taking suitable precautionary actions and the cause of obstruction is removed, the SM shall cancel the SOS message by pressing 'Cancel' and 'Common' buttons simultaneously.
- v. The Manual SOS generated as above, will be communicated by Station KAVACH every 2 seconds and the speed of such trains shall be restored only if any one of the following conditions is satisfied: -
 1. SOS message is cancelled by the source.
 2. Train is moved away more than 1500m (Configurable) from the source.
 3. If the SOS message reception is not there from the source for more than three minutes.

Kavach equipment shall log the events of sending and receiving of SOS in the Event Logger.

3.4 SOS acknowledgement by SM

TSR-ACK button (Yellow colour) has to be pressed to acknowledge display screen and buzzer.

3.5 Reporting of Kavach Failures

A log of every failure displayed and its restoration has to be maintained in a separate register and information to be given to S&T department.

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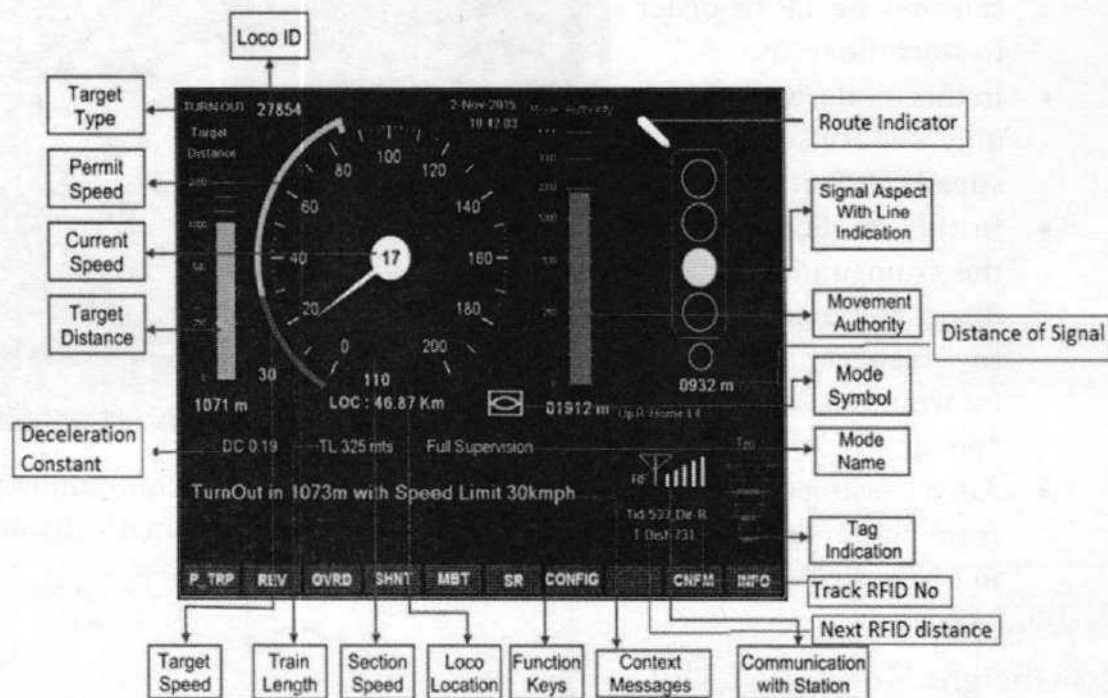
3.6 Variations in Station Master Operation Cum Indication Panel (SMOCIP) in different makes

At present, there are three makes of SM-OCIP being used in SCR namely- Medha make, Kernex make and HBL make. There may be slight variation of the indications/ provision of buttons. For reference, the photographs of different makes of SM-OCIP are provided below-



4. Operational Modes of Onboard Kavach for Version 4.0

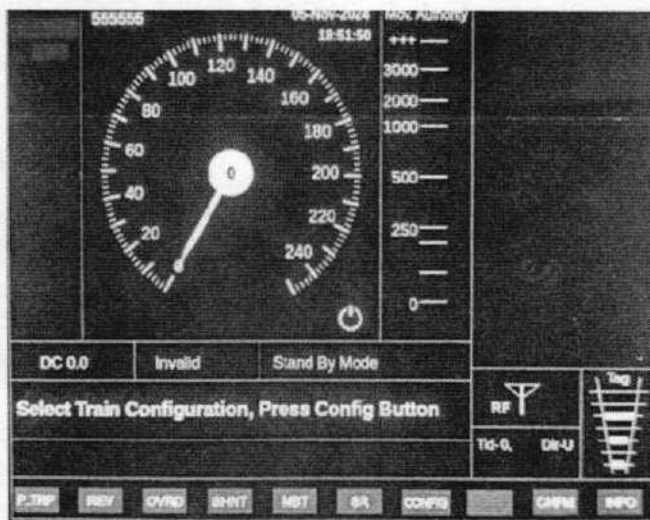
4.1 Driver Machine Interface (DMI) at a glance



4.2 Different Types of Operational Modes of Onboard Kavach for Version 4.0

4.2.1 Standby Mode (SB):

- When Loco is energized and Kavach unit is switched on, the Kavach unit comes into Standby (SB) mode
- The SB mode is the default mode.
- In this mode, train is supervised for STOP DEAD (STANDSTILL) only. If any movement is detected, it applies Emergency Brake.
- The loco pilot cannot move the train in this mode.
- Kavach performs brake system health test when Onboard Kavach is energized and DMI activated.
- Once Train configuration is completed, Loco pilot can opt for changing the mode from 'Standby' to 'Staff Responsible' or 'Shunt' Mode.



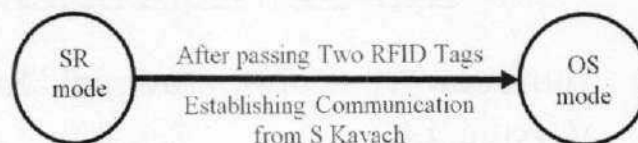
4.2.2 Staff Responsible Mode (SR):

- This mode needs to be selected by LP in order to start the train.
- In this mode, Kavach will only supervise a ceiling speed (MPS of Loco).
- In this mode, LP moves the train under his/her direct responsibility. LP to respect line side information (signals, speed boards).
- After passing two RFID tags (for getting direction) and communication from stationary Kavach, the on board Kavach will automatically enter in to 'On sight' mode.

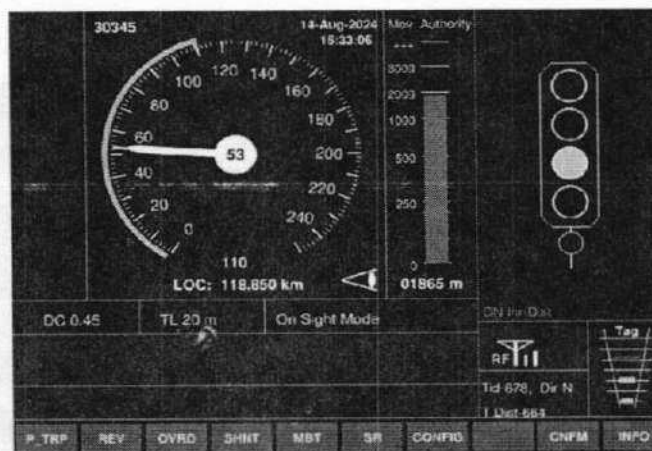


4.2.3 Onsight Mode (OS):

- Onsight mode appears in multiple scenarios



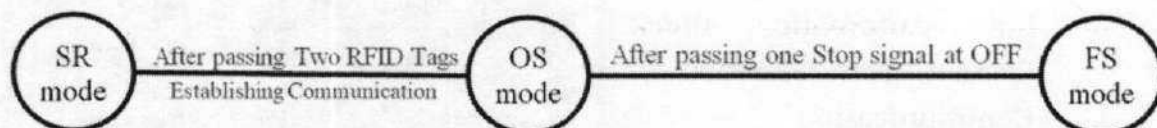
- Once the Onboard Kavach is SR mode and it passes two RFID tags (on establishment of direction) and on reception of information from Skavach, the Onboard Kavach transits from SR mode to OS mode



- with a speed permitted up to the Maximum Sectional Speed.
- When there is a failure of communication from Skavach which is subsequently restored, the Onboard transits from LS/SR to OS mode, allowing speeds up to the MRSP (Most Restrictive Speed Profile).
- When the loco pilot presses the OVRD and CNFM buttons to pass a signal at ON, the locomotive enters Onsight mode with a speed restriction of 15 km/h (except for LSS/IBS) and MPS for LSS/IBS respectively.

- In P-Trip mode, Onboard Kavach enters into OS mode on pressing the OVRD and CNFM buttons
- When a Calling-on signal taken OFF, the system enters into OS mode and prompts the LP for acknowledgement for OS mode.
- When the train crosses at least one stop signal in OFF position then OS mode automatically shifts to FS mode.
- This Mode is under review and the features / conditions are subject to change.

4.2.4 Full Supervision Mode (FS):

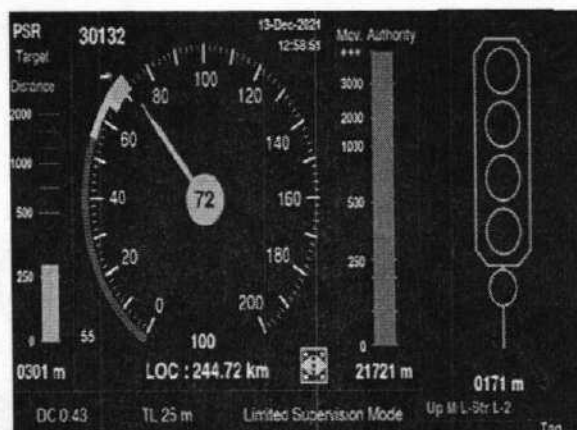
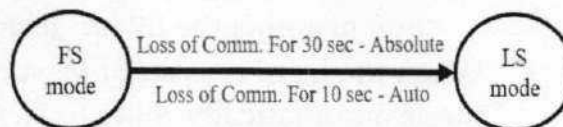


- Full Supervision mode shall be entered automatically when all the following necessary conditions are fulfilled:
 - i. Track profile Available (Including Traffic Direction) up to 3000m or Movement Authority, whichever is less.
 - ii. Valid Radio Packets are receiving in communication mandatory area.
 - iii. Movement Authority is valid.
 - iv. After coming to On Sight mode, train has crossed at least one stop signal in OFF condition
- The loco Kavach unit shall supervise train movements against a dynamic speed profile.
- Onboard Kavach will revert to Staff Responsible (SR) mode if any of the following conditions occur:
 - (i) Valid Radio packets are not available in communication mandatory area and track profile is not available up to 3000m or Movement Authority, whichever is less.
 - (ii) When three consecutive tags are missed.
 - (iii) Kavach Territory Exit tag is read.
 - (iv) Train traffic direction is unknown.



4.2.5 Limited Supervision Mode (LS)

- The Kavach will automatically enter LS mode from FS mode when Radio packets are not available/received for 30 seconds (configurable) for Absolute Block System and 10 seconds (configurable) for Automatic Block System from SKavach in Communication Mandatory Area but track profile is available up to 3000m.



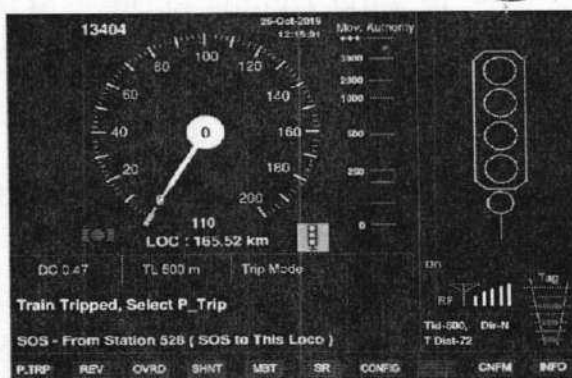
- Limited supervision mode enables Onboard Kavach to supervise track profile in case of communication failure.
- It supervises train movement against a dynamic speed profile.
- It obeys general SOS from station if loco is within 3000m.
- It also supervises roll away and reverse movement protection.
- Kavach will transit from LS to SR in case track profile is not available upto 3000m (configurable) or when three consecutive tags are missed or Kavach territory exit tag is read or traffic direction is unknown.

4.2.6 TRIP Mode (TR)

- When Loco Kavach is in FS/OS mode and the train passes a stop signal at ON or end of authority, Kavach will automatically enter into trip mode
- Loco applies EB continuously.
- Loco pilot has to acknowledge by pressing P_Trip followed by CNFM, then it releases EB.

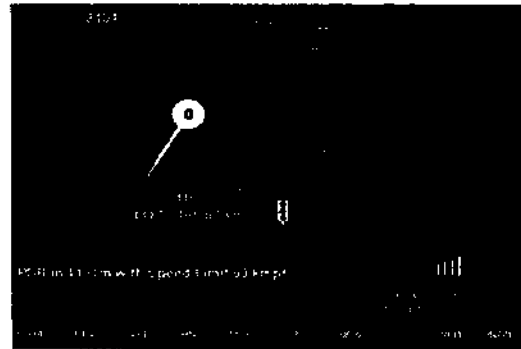
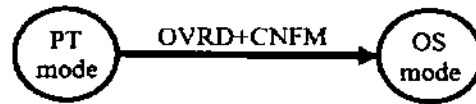
After Passing the RED Signal in FS/OS mode

TRIP mode



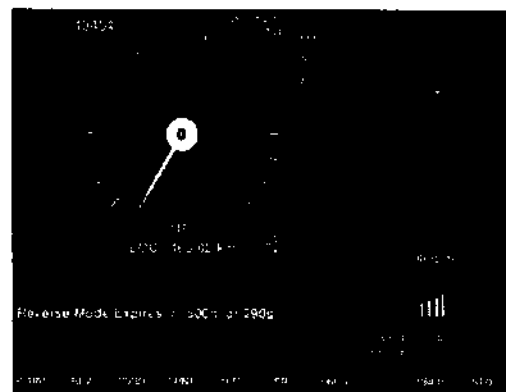
4.2.7 Post Trip Mode (PT)

- LP shall manually select Post Trip Mode in order to come out of Trip Mode
- LP can do this only when the train is at STOP DEAD (STANDSTILL).
- The post trip mode shall be entered by pressing P_Trip followed by CNFM. P_Trip button followed by CNFM button, and then Kavach releases EB.
- As the train has passed signal at ON, necessary rules as in G&SR shall be followed. Required authorities shall be made and obtained before starting the train.
- After obtaining the above authorities, for the train to start, LP is required to press OVRD button followed by CNFM button in order to enter to OS mode from PT mode.



4.2.8 Reverse Mode (RV)

- This mode shall be used by LP only when reverse movement without cab change is permitted in rules. Else cab change must be done.
- This mode allows the LP to change the direction of movement of the train and drive from the same cab, i.e., the train orientation remains unchanged.
- LP shall enter manually when the train is at STOP DEAD (STANDSTILL) by pressing REV button, followed by CNFM soft keys on DMI.
- The loco Kavach unit shall supervise train movements against a ceiling speed (Default 25 kmph), distance (Default 500 mts) and time out (Default 300 sec) for which reverse movement is allowed.



4.2.9 Non-Leading Mode (NL)

- The non-leading mode is defined to manage the loco Kavach unit of a slave engine that is either electrically coupled to the leading engine or not electrically coupled to the leading engine.
- LP shall enter manually when the train is at STOP DEAD (STANDSTILL).
- The loco Kavach shall not perform any train movement supervision in this mode.



4.2.10 Shunt Mode (SH)

- Shunt mode shall be selected by loco pilot for shunting movements. It shall only be accepted by Kavach when the train is at STOP DEAD (STANDSTILL).
- It shall be possible to manually select shunting mode from SB, SR, LS, FS mode by pressing SHNT followed by CNFM soft key on DMI.
- Supervises Shunt mode speed (default: 15 kmph) within station section.
- SKavach generates SOS if the train crosses the shunting limits.



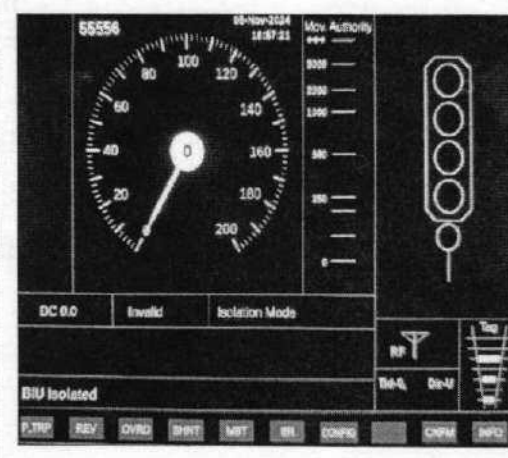
4.2.11 System Failure Mode (SF)

- The loco Kavach unit shall switch automatically to this mode in case of a fault which affects the functioning of loco Kavach.
- The Loco Pilot shall isolate Kavach, which means that Loco shall be no more under the control of Loco Kavach unit.

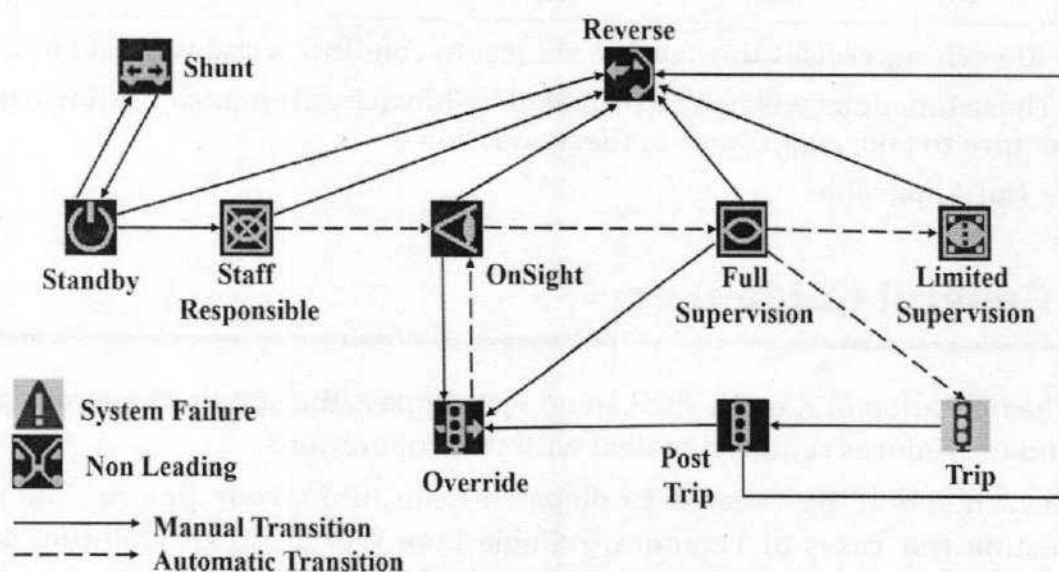


4.2.12 Isolation Mode (IS)

- This mode is manually selected by LP during malfunctioning of Kavach.
- In this mode, the loco Kavach unit shall be physically isolated from the brakes and shall not perform any train supervision.
- There shall be a clear indication on DMI that the loco Kavach is isolated (Manual isolation)



4.3 Mode Transitions in KAVACH Ver. 4



4.4 Kavach Features functional in Different Operational Modes (Subject to conditions)

| Features→
Mode ↓ | Kavach Functions | | | | Kavach ensures following inputs from underlying signalling | |
|---------------------|----------------------|---------------|---|-------------------------------------|--|-----------------|
| | Preventing Roll Away | Observing PSR | Speed (Configurable) beyond which Kavach will apply brake | Display of Signal Aspect on LP-OCIP | Route Locking upto Movement Authority | Track Occupancy |
| SB | Yes | N/A | Standstill | N/A | N/A | N/A |
| SR | Yes | No | Ceiling Speed (MPS of Loco) | No | No | No |
| OS | Yes | Under Review | Under Review | Under Review | Under Review | No |
| FS | Yes | Yes | Based on Dynamic Speed Profile | Yes | Yes | Yes |
| LS | Yes | Yes | Based on Dynamic Speed Profile | No | Yes | No |
| TR | Yes | N/A | Standstill | N/A | N/A | N/A |
| PT | Yes | No | 15 Kmph | No | No | No |
| RV | Yes | No | 25 Kmph | No | No | No |
| SH | Yes | No | 15 Kmph | No | No | No |
| NL | No | No | No | No | No | No |
| SF | No | No | No | No | N/ A | No |
| IS | No | No | No | No | N/ A | No |

Yes – Kavach supervises this feature subject to conditions and will act on its own.

No – These functions will not be provided by Kavach automatically /Kavach will not require to take cognizance of these function.

N/A – Not Applicable.

5. General Guidelines

- The operation of Kavach shall, in no way, bypass the standard operating rules and procedures required to deal with train operations.
- Kavach should be isolated to dispatch train into wrong line in double line section (for cases of Temporary Single Line Working), for shunting beyond station section and during Non-Interlocked (NI) working.
- As on date, no G&SR amendment has been issued regarding Kavach.

6. Frequently Asked Questions (FAQs)

1. What action is to be taken when a RFID tag missing/Damage observed in station premises?

RFID tags do not control conventional Line side Railway Signals. Hence, absence or damage or deterioration of RFID tags does not cause Signal failures. However, absence or damage or deterioration of RFID tags of Kavach would render non-availability of supervision features provided by Kavach. Hence, information regarding missing /Damages of RFID tags when brought to his knowledge, SM shall communicate to Divisional Signal Control.

2. Where to get the complete working instructions of the SM-OCIP?

The system of working and Station Master's operations pertaining to Station Master Operation Cum Indication Panel (SM-OCIP) is incorporated in Appendix-C of Station Working Rules of stations equipped with Kavach.

3. During the case of generation of manual SOS, SM is supposed to put back already given signals?

Yes, as soon as SM notices or receives any message which endangers through traffic and needs to stop a train, SM has to follow the all the operating procedures required as per G&SR and in addition to above, SM has to generate SOS.

4. Is it possible to have Kavach protections among Kavach and Non-Kavach trains?

- (a) In case of availability of signaling information from Stationary Kavach, the protection will be available in case defaulting train is fitted with Communicating Kavach.
- (b) In absence of Stationary Kavach Unit or non-availability of Signalling information from Stationary Kavach, the protection will not be available between Kavach and Non-Kavach trains.
- (c) In absence of Stationary Kavach Unit or non-availability of Signalling information from Stationary Kavach, the protection will be available only when both the trains are fitted with Communicating Kavach and section is provided with RFID tags.

5. How to restore the normalcy, if by mistake SOS is generated by SM by operating SM-OCIP?

SM has to cancel the wrongly generated SOS by pressing CANCEL and COMMON buttons on the SM-OCIP together with SM's Key is in "IN" position.
