

**Assistant Loco Pilot Induction Training Course – Electric Traction**

	Modules	Duration
A	Transportation Module	24 days
B	Technical Module	98 days
	<b>Total</b>	<b>122 days</b>

**DESCRIPTION**

(A)Transportation, First Aid, Fire Fighting

**DURATION**

24 days

Sno.	Subject	Duration in days
1.	Important definitions such as Adequate Distance, Block Section, Isolation, Faulting mark, Running Line, Axle counter, Station section. Authority to proceed and Station working rules, Light engine, Relief Engine, Banking Engine, Train Engine, Shunting Engine, etc	24 days
2.	Personal equipment of ALP	
3.	Stations <ul style="list-style-type: none"> <li>• Kinds and classification of stations minimum essential signals etc. for each station.</li> <li>• Block and non-Block stations.</li> <li>• Block overlap.</li> <li>• Yard Layout, etc.</li> </ul>	
4.	System of working – <ul style="list-style-type: none"> <li>• Absolute Block System</li> <li>• Automatic Block System,</li> <li>• Train following System, etc</li> </ul>	
5.	Signals – <ul style="list-style-type: none"> <li>• Necessity and Evaluation of signals,</li> <li>• classification and kinds of signals,</li> <li>• Approach and Departure signals permissive signals, subsidiary signals, etc.</li> </ul>	
6.	Defective signals <ul style="list-style-type: none"> <li>• Defective signal, Automatic signals, Semi-automatic and Gate signals, manual signals.</li> <li>• Action and rules for passing defective signals of different types.</li> <li>• Practical tour for sight in Yard.</li> </ul>	
7.	Engineering signals – <ul style="list-style-type: none"> <li>• Engineering Signals. Their placement.</li> <li>• Permanent and Temporary Engineering Cautions.</li> <li>• Brief of Ghat Section.</li> <li>• Speeds.</li> </ul>	
8.	Isolation	
9.	Different authorities/forms	

10.	<b>Working of trains</b> <ul style="list-style-type: none"> <li>• When Headlight is failed.</li> <li>• When a train is received on Blocked line or to be started from a Non-Signal/Non running line without brake van or without guard.</li> <li>• Departure from non-signaled line</li> <li>• When train has a hot axle.</li> <li>• Having ODC</li> <li>• Train formed from a non-TXR point, etc.</li> <li>• Caution order</li> <li>• Authorized persons in Cab</li> <li>• Stopping on gradient</li> </ul>
11.	<b>Abnormal working –</b> <ul style="list-style-type: none"> <li>• Rules for working of trains – single line working on Double line in absolute and automatic Block Sections.</li> <li>• Total failure Communication.</li> <li>• Rules for sending relief engine from right line and wrong line.</li> <li>• Precautions to be observed during abnormal working in different cases.</li> </ul>
12.	<b>Shunting –</b> <ul style="list-style-type: none"> <li>• Kinds of shunting.</li> <li>• Precautions for safe and smooth shunting.</li> <li>• Rules for shunting in Yard, coaching Yard and “B” class stations.</li> <li>• Model Room training.</li> </ul>
13.	<b>Train operation in fog</b>
14.	<b>Protection Rules</b>
15.	<b>Exchange of Signal &amp; its significance</b>
16.	<b>Accident –</b> <ul style="list-style-type: none"> <li>• Duties of ALP in case of accident.</li> <li>• Mid Section derailments. Engine failures etc.</li> <li>• Over shooting</li> <li>• Protection in block section in case of accidents.</li> <li>• Use of detonators</li> </ul>
17.	<b>Duties in case of fire in train/loco.</b>
18.	<b>Identifying and handling of various types of fire extinguishers, precautions to be taken while extinguishing fire, Render first aid to the burn injuries, first aid to persons affected by suffocation, communication, etc.</b>
19.	<b>Exam</b>

(B) Assistant Loco Pilot Induction Training Course – Electric Traction

Course Code - AIM

Sn.	Training Content	Duration (in days)	
		Class Trg.	Field Trg.
		1	
<b>AIM-1</b>	<b>Orientation Module</b>		
	Organizational structure of IR		
	Comprehensive presentation on the independent role of ALP	0.25	
<b>AIM-2</b>	<b>Lobby Module</b>		
	General Description of Lobby working		
	Procedure of Sign-On & Sign-Off through CMS kiosk, Breathalyzer test	0.25	
<b>AIM-3</b>	<b>Running Room Module</b>		
	Overview of Running Room functioning		
	Brief on rest rules and importance of it in life of running staff	0.5	
<b>AIM-4</b>	<b>Yard Module - Yard &amp; Yard Master office</b>		
	Overview of Yard layout & functions		
	Learning road procedure in yards	0.5	
<b>AIM-5</b>	<b>Station Module - Station and SM office</b>		
	Brief description of duties performed by SM/ASM & importance of Signal exchange by station staff		
	Overview on Grant of block - Traffic and OHE, means of communication & tools available at stations		
	<b>Field visit on the above modules</b>		2
<b>AIM-6</b>	<b>Driving Module - Initial</b>	4	
	Familiarization with cab & apparatus there in		
	Loco log book		
	Signal call out		
	Duties of ALP		
	<b>Footplate / Field training as Co-ALP</b>		3
	<b>Exam ( AIM 1 - 6 )</b>	0.5	
<b>AIM-7</b>	<b>Loco Module</b>		
	Basic circuitry concept	1	
	Under Frame	4	1
	Machine Room & panels	3	1
	<b>Footplate / Field training as Co-ALP</b>		4
	Locomotive Roof	1	1
	Pneumatic Module incl. testing	3	2
	<b>Footplate / Field training as Co-ALP</b>		3
	<b>Exam - ( AIM - 7 )</b>	0.5	

Sn.	Training Content	Duration (in days)	
		Class Trg.	Field Trg.
<b>AIM-8</b>	<b>Driving Module - Advance</b>		
	Precautions & inspections of loco	10	
	Loco energizing de-energizing procedure / sequence		

Sn.	Training Content	Duration ( in days )	
		Class Trg.	Field Trg.
	Stabling of loco		
	Grounding & un-grounding procedure		
	Cab changing procedure		
	<b>Footplate / Field training as Co-ALP</b>		4
	Knowledge of safety equipment		
	Description of Flasher light		
	Attaching & detaching locomotive		
	MU operation and cab changing procedure		
	<b>Footplate / Field training as Co-ALP</b>		4
	<b>Exam – ( AIM 8 )</b>	0.5	
<b>AIM-9</b>	<b>C&amp;W and Air Brake Module &amp;brief overview/knowledge of EMU/ MEMU, Vande Bharat type train set, Push-Pull etc.</b>	2	
<b>AIM-10</b>	<b>TrD Module</b>	1	
<b>AIM-11</b>	<b>Control Office Module (TLC, TPC &amp; Section Controller)</b>	1	1
	<b>Exam (AIM 9-11)</b>	0.5	
<b>AIM-12</b>	<b>Safety Module – Duties / Role of ALP</b>	4	
	Derailment, collision, Fire, etc		
	Train protection and opposite line protection		
	Train operation during fog / poor visibility		
	OHE hanging / OHE breakdown		
	Axle seizure / hot axle, etc		
	<b>Footplate / Field training as Co-ALP</b>		4
<b>AIM-13</b>	<b>Loco Operation Module</b>	4	
	Action in case of trouble / failure of loco with the help of TSD or helpline		
	Lookout on signal, track, OHE & adjacent line, Tress passers etc.		
	EEC & GR manual operation in Conventional loco.		
	VCD act on line		
	Operation of PTDC in three phase locomotives		
	Working from rear cab		
	<b>Footplate / Field training as Co-ALP</b>		4

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Sn.	2024/E(Trg)/41/13 Training Content	Duration ( in days )	
		Class Trg.	Field Trg.
<b>AIM-14</b>	<b>Train Operation Module</b>	3	
	Detection of flat wheel /hot axle in loco / train		
	Train stalled on gradient section & precautions to avoid rolling down		
	In case of FIBA, VESDA, etc act on line		
	Train working in case of failure of air suspension spring		
	Hose pipe disconnection		
	Miscellaneous failures in train/ wagons		
	<b>Footplate / Field training as Co-ALP</b>		4
	<b>Exam (AIM 12-14)</b>	0.5	
<b>AIM-15</b>	<b>Learning Road Module</b>	1	
	Importance of quality Road learning		
	Methodology of quality LR - marking of features of sections like critical locations, signal, gradient, etc		
	Sketching of critical yard and multiple line stations.		
<b>AIM-16</b>	<b>'KAVACH' Module</b>	2	
<b>AIM-17</b>	<b>Simulator and Tripping car Module</b>	3	
	Practical training of ALP on simulator including application of emergency brake by trainee ALP through RS valve		
	Manual operation of GR & EEC in conventional loco tripping car		
	<b>Footplate / Field training as Co-ALP</b>		4
<b>AIM -18</b>	<b>Case Studies Module</b>	3	
	Case studies linked with various above modules		
	<b>Final Exam covering all modules</b>	1	
	<b>Total Days</b>	56	42
	<b>Grand Total Days</b>	<b>98</b>	

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**DESCRIPTION**  
Orientation Module

**DURATION**  
1 day

**CONTENT**

Sno.	Subject	Duration in days
1.	Welcome address & brief on organizational structure of Indian Railways, brief on departments & role.	1 Day
2.	Comprehensive presentation on the independent role of ALP in safe train operation & brief description of ACTM and relevant rules applicable to ALP like Cleanliness of Loco, lookout glass cleaning, ALP shall assist the LP, to obey the lawful order of LP, etc.	
3.	Precaution/rules to be followed in electrified zone/electric locomotive <ul style="list-style-type: none"> <li>• Safety precautions related to 25kV OHE</li> <li>• Safety precautions during corridor / machine room inspection on moving loco</li> </ul>	
4.	Role of punctuality in life of running staff	
5.	Appearance and proper uniform.	
6.	Safety precaution during field training, shed visit, riding on loco, crossing of railway track.	

AIM-2

**DESCRIPTION**  
Lobby Module

**DURATION**  
¼ day

**CONTENT**

Sno.	Subject	Duration in days
1.	General Description of Lobby working	¼ day
2.	Procedure of Sign-On & Sign-Off through CMS kiosk	
3.	Breathalyzer test & its importance (Dos/Don'ts related to consumption of alcohol)	
4.	Overview of Registers & notices/safety bulleting kept in lobbies	
5.	Booking pattern of ALPs on freight trains (FIFO, booking after availing leaves, after PR, etc.)	
6.	Serving of call book	
7.	Leave sanctioning procedure by Sr.CC/CC	
8.	Brief overview of IT tools like HRMS, CMS etc.	
9.	Chalak Dal App and Usage.	

AIM-3

**DESCRIPTION**

**DURATION**

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**CONTENT**

Sno.	Subject	Duration in days
1.	Overview of Running Room functioning	¼ day
2.	Exposure on common facilities available in Running Rooms	
3.	Brief on rest rules and importance of it in life of running staff	
4.	Overview of subsidized meal system in running rooms, system of meal where subsidized meal is not available.	
5.	Dos & don'ts during stay in running room	
6.	Switching off of mobile during rest period in running room	
7.	Procedure of call book serving in running room	
8.	Reporting for duty at out station lobby well in before schedule departure of train (mentioned in call book)	

**AIM-4****DESCRIPTION**

**Yard Module** – Yard & yard Master's office visit incl. LR on foot procedure in yards

**DURATION**

½ day

**CONTENT**

Sno.	Subject	Duration in days
1.	Overview of Yard layout	½ day
2.	Brief on of yard operations : use of switches (turnouts) to direct trains to the appropriate tracks for sorting, classification, or departure.	
3.	Communicating with train crews, including Train Managers (Guard), to ensure a smooth departure and arrival of trains.	
4.	Managing signals within the yard to control the movement of trains and ensure safety during shunting and marshalling.	
5.	Dispatching trains from the yard, coordinating with other yard masters, section controllers, and higher authorities.	
6.	Learning road procedure in yards : On foot LR to conversant with yard signals, crossings, points, washing line, pit line, wired/unwired lines, etc.	

**AIM-5****DESCRIPTION****DURATION**

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**CONTENT**


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Sno.	Subject	Duration in days
1.	Brief description of duties performed by SM/ASM	½ day
2.	Importance of Signal exchange by station staff with passing trains.	
3.	Communicating with section controller to coordinate train movements.	
4.	Line clear obtaining / granting procedure as per system of working.	
5.	Departure/Arrival of trains from/to the station in accordance with the schedule and safety protocols.	
6.	Managing and controlling signals at the station to facilitate safe train movements on the assigned tracks.	
7.	Responding to emergencies, accidents, or incidents at the station and coordinating with relevant authorities for assistance.	
8.	Facilitating the changeover of train crews at the station.	
9.	Brief description on means of communications available in SM's office/cabin like Control phone, TLC/TPC phone, P&T phone, VHF set, walkie-talkie, etc.	
10.	Tools available with ASM/SM for securing the loads like chains, sprag & wedges, padlocks, clamps etc,	
11.	Registers like stabling register, train intactness register etc	
12.	Overview on Grant of block - Traffic and OHE	
13.	Role of station staff like Porter/Points men and their duties during train passing and signal exchanging with train crew, stabling of load, etc.	
14.	General description of responsibility of Technician Signal (ESM), relay room, panel etc.	
15.	Brief overview of Data logger.	

**Field Visit on above modules**

**DURATION**

**2 days**

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**DESCRIPTION**

Driving Module - Initial

**DURATION**

4 days

**CONTENT**

<b>Sno.</b>	<b>Subject</b>	<b>Duration in days</b>
1.	Familiarization with layout of loco cabs of all variants of three phase & conventional locomotives (incl. WAG12 etc.)	4 days
2.	Knowledge of A9/SA9 brake valves, Horn, wiper, other apparatus in cab	
3.	Knowledge of various equipment like Headlight, Flasher light, Marker light, gauges & meters in cab, etc and their functions.	
4.	Location of handbrake / parking brake and its operation	
5.	RS valve (emergency brake valve)	
6.	Familiarization with Loco log book & Loco Pilot's pocket diary	
7.	Duties of ALP w.r.t. signals	
8.	Importance of Signal call out and procedure (Demonstration of procedure of call out signal as per instructions laid down. This should be demonstrated by each trainee ALP multiple times)	

**Footplate /Field training as Co-ALP****DURATION**

3 days

Footplate /Field training as Co-ALP for observe the cab of various class electric locomotives (incl. WAG12 etc) and functions of ALPs during normal train operation. Special emphasis should be given to procedure of signal call out by ALP.

**Exam****DURATION**

½ day

Exam – (AIM-1 to AIM-6).

**DESCRIPTION**

Loco Module

**DURATION**

24days

Incl. Shed/field/Practical/  
Footplate**CONTENT****Loco Sub-Module – Basic Circuitry Concept****1 Day**

Sno.	Subject	Duration in days
1.	<b>Basic Circuitry Concept</b>	
1.1	Principle of electric locomotives - three phase & conventional electric locomotives (incl WAG12etc)	1 Day
1.2	Brief description of different electrical circuits of 3 Phase electric locomotives (inc. WAG12 etc)	
1.3	Brief description of different electrical circuits of conventional electric locomotives	

**Loco Sub-Module – Under Frame****5 Days**

Sno.	Subject	Duration in days
2.	<b>Loco Under Frame</b>	4 days
2.1	Brief description on under frame safety fittings & intactness like cattle guard, rail guard, sand box & sander pipes, side buffers, CBC & TC coupling, axle box, battery box, other under gear equipment which needs to be checked on line, etc.	
2.2	Different parts of bogies of conventional & three phase locomotives which needs to be checked for safety of locomotive.	
2.3	Location of different type of pneumatic valves, cocks, gauges and their normal positions	
2.4	Moisture draining locations, location of lubrication points, etc.	
2.5	Application of hand brake / parking brake and releasing.	
2.6	Location of wooden wedges and usage	
2.7	<b>Shed/field visit for location of equipment &amp; practical training</b>	1 day

I/3109873/2024 **Loco Sub-Module – Machine Room & panels****4 Days**

<b>3.</b>	<b>Machine Room &amp; panels</b>	
3.1	Layout & location of equipment in corridors, machine room.	3 days
3.2	Location of various pneumatic pressure switches which needs to check during trouble shooting.	
3.3	Brief description of relays, switches, MCB etc and their normal positions.	
3.4	Location and checking procedure of different oil levels like GR, transformer, traction converters, CP, coolant level of Traction converter etc.	
3.5	Location of fixed and portable fire extinguishers and their usages.	
3.6	<b>Shed / field visit for location of equipment &amp; practical training</b>	1 day

**Footplate /Field training as Co-ALP****DURATION  
4 days**

Footplate /Field training as Co-ALP for observe & learn the location and functions of various locomotive equipment and action of ALPs during normal train operation.

**Loco Sub-Module – Roof****2 Day**

<b>4.</b>	<b>Roof Module</b>	
4.1	Brief description of loco roof equipment like pantograph, roof bars, HPT link, surge arrestor etc.	1 day
4.2	Description of various equipment of pantograph.	
4.3	Knowledge of ORD in high reach pantograph	
4.4	Raising & lowering of pantograph	
4.5	<b>Shed/ Field visit for location of equipment &amp; practical training</b>	1 day

**Loco Sub-Module – Pneumatic incl testing****5Days**

<b>5.</b>	<b>Pneumatic test &amp; procedures</b>	
5.1	Basic principle of loco brake system	3 days
5.2	Description of E-70 & CCB brake panel of three phase locomotives	
5.3	Function of A9 & SA9 valves and their different positions along with amount of pressure drop.	
5.4	Overview of PTDC procedure of three phase locomotive.	
5.5	Working of Compressor, MR buildup and creation of BP & FP.	
5.6	Application of brake through A9 & SA9 and releasing	
5.7	Procedure of BP leak test	
5.8	Procedure of FP leak test	
5.9	Procedure for leak test in train	

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5.	<b>Pneumatic test &amp; procedures</b>	
5.10	Description of continuity test and procedure	
5.11	Importance of brake feel test & brake power test and procedure	
5.12	Testing procedure of loco brake power & its importance in light engine operation.	
5.13	Function & use of BPEMS switch.	
5.15	Hose pipe connection/disconnection	
5.16	<b>Shed/field visit for location of equipment &amp; practical training</b>	2 days

**DURATION**  
3 days

**Footplate /Field training as Co-ALP**

Footplate /Field training as Co-ALP for observe & learn the location and functions of various pneumatic equipment on loco and actions of ALPs during above operations.

**DURATION**  
½ day

**Exam**

**CONTENT**

Exam – (AIM-7).

**AIM-8**

**DESCRIPTION**

Driving Module - Advance

**DURATION**  
18 days

Incl. Shed/field/Practical/  
Footplate

**CONTENT**

Sno.	Subject	Duration in days
	<b>Part-I</b>	5 days
1.	Precautions & inspections of loco before taking over charge in yards, shed/outpit, etc like ensuring loco standing online & under OHE, general inspection of loco under frame, etc.	
2.	Description of Flasher light and its usage & checking procedure	
3.	Loco energizing precautions, procedure / sequence	
4.	Loco de-energizing procedure/sequence	
5.	Stabling of loco (including securing of loco using hand brake, parking brake, wooden wedges, etc.).	
6.	Inspection of loco at halts & crew changing points, inspection of axle boxes, under frame equipment and TM fixation and draining of MRs etc.	
7.	Grounding & ungrounding procedure of three phase & conventional loco.	
8.	Cab changing procedure	

1/3109873/2024 **Footplate /Field training as Co-ALP**

Footplate /Field training as Co-ALP for observe & learn the above procedures, tests and action of ALPs during normal train operation.

Sno.	Subject	Duration in days
	<b>Part-II</b>	5 days
1.	Multiple loco operation and cab changing procedure	
2.	Overview on operation of PTDC in three phase locomotive	
3.	Attaching & detaching locomotive including coupling, hose pipe connection, and precaution before attaching on load	
4.	Brake continuity test and its procedure	
5.	Loco brake testing procedure	
6.	Brief overview of long-haul / Python train & Push-Pull loco operation	
7.	Overview of DPWCS, EOTT, etc.	
8.	Knowledge of safety equipment like VCD, RDAS, FogSafe/FogPass device, etc.	
9.	Operation of sanding gear and its importance	
10.	Procedure of loco HT/LT testing	

**DURATION**  
4 days

**Footplate /Field training as Co-ALP**

Footplate /Field training as Co-ALP for observe & learn the above procedures, tests and action of ALPs.

**DURATION**  
½ day

**Exam****CONTENT**

*Exam = (AIM-8).*

AIM-9

**DESCRIPTION**

**C&W and Air Brake Module & EMU/MEMU, Vande-Bharat type train set, Push-Pull, etc.**

**DURATION**

2 days

**CONTENT**

Sno.	Subject	Duration in days
1.	Different types of Rolling stock - Nomenclature	2 days
2.	Air brake system - working method with diagrams, parts & functions, working single pipe and Twin pipe air brake system. Pneumatic brake - working principle, BMBS and APS, Hand brake in rolling stock.	
3.	Brake power certificates - kinds - Coaching & Freight trains, percentage of brake power required in goods/mixed/passenger trains, Alarm chain pulling - resetting & isolation, FIBA, Fire Detection(VESDA), etc	
4.	Continuity test, cases of brake binding and releasing, Flat wheel detection and action to be taken.	
5.	LHB coach, Hybrid coach, conventional coach, Hot axle symptoms and action to be taken.	
6.	Guard & Loco Pilot check - clearance from road side station/sidings/non-TXR points & brake power calculation	
7.	Brake continuity test and its importance, isolation of distributor valve.	
8.	Brief overview/knowledge of EMU/MEMU, Vande-Bharat type train set, Push-Pull, etc.	
9.	Train working with out guard	
10.	Discussion on Miscellaneous failures in trains / wagons	

AIM-10

**DESCRIPTION**

**TrD Module**

**DURATION**

1 day

**CONTENT**

Sno.	Subject	Duration in days
1.	Brief overview of OHE system	1 day
2.	Familiarization with OHE equipment for identification (including cantilever assembly)	
3.	Electrical engineering boards	
4.	Description & usage of neutral section related boards (500 meter board, 250 meter board, DJ open board, DJ close board).	
5.	Duties of ALP during OHE Break Down.	
6.	Precaution before passing neutral section and before resuming traction after passing neutral section	
7.	Description of SIGMA board and its importance	

AIM-11

DESCRIPTION  
Control Office Module

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DURATION  
2 days

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Incl. Shed/field/Practical/  
Footplate

**CONTENT**

Sno.	Subject	Duration in days
1.	<b>Traction Control Office</b>	½ day
1.1	Brief description on the role of Traction Control organizational structure	
1.2	Communication protocol for informing TLC regarding loco failure, abnormalities, etc.	
1.3	Exposure of related IT tools like ICMS, FOIS, etc.	
1.4	General knowledge of Booked speed, Max speed, sectional speed	
1.5	General knowledge of Crew link, loco link, etc.	
1.6	Maintaining various records regarding schedule inspection carried out, overdue, etc.	
1.7	Overview of the trip schedule of locomotives.	
1.8	Brief description on the role of Traction Power Controller & visit to SCADA control room	
1.9	Overview of RTIS equipment, usage and precautions.	
2.	<b>Section Controller Office</b>	½ day
2.1	Brief overview of Section Control office	
2.2	Brief description of duties/tasks performed by Section controllers w.r.t. train movement viz controlling the movement of trains within the assigned railway section, Monitoring and ensuring that trains adhere to their schedules, Communicating with Station Masters, making decisions on train priorities, overtaking, and other operational matters to ensure efficient and safe train operations, etc.	
2.3	Responding to emergencies such as accidents, breakdowns, or other incidents that may affect train operations and coordination with relevant authorities and initiating appropriate actions to address emergencies.	
2.4	Maintaining communication with train crews, station staff, and other relevant personnel to relay important information and instructions.	

**Field visit**

DURATION  
1 day

**CONTENT**

Field Visit (under supervision of Training Instructor / CLI) of TLC office, TPC office, SCADA and Section Controller Office for observe the functions of the establishments.

**Exam**

DURATION  
½ day

Exam – (AIM-9 – AIM-11).

AIM-12

**DESCRIPTION**

Safety Module – Duties/Role of ALP

**DURATION**

8 days

Incl. Shed/field/Practical/  
Footplate**CONTENT**

Sno.	Subject	Duration in days
1.	Derailment, collision, etc	4 days
2.	Train protection and opposite line protection	
3.	OHE hanging / OHE breakdown	
4.	Axle seizure / hot axle	
5.	Smoke from underslung equipment	
6.	Operation during water on track or flood	
7.	Obstructed track / land slide	
8.	Train operation during fog/poor visibility	
9.	In case of train parting	
10.	Flasher light of opposite train glowing	
11.	Panto entanglement and securing of broken pantograph & isolation of pantograph (through HPT link on loco roof)	
12.	In case of loco entered in unwired territory	
13.	Cattle Run Over (CRO) & inspection of loco after CRO	
14.	Fire in train / locomotive	
15.	Use of detonators & related duties	

**Footplate /Field training as Co-ALP****DURATION**

4 days

Footplate /Field training as Co-ALP for observe & learn the actions of ALPs during normal train operation.

**DESCRIPTION**  
Locomotive Operation Module

**DURATION**  
8 days  
Incl. Shed/field/Practical/  
Footplate

**CONTENT**

Sno.	Subject	Duration in days
1.	Sharp lookout on signal, track, OHE & adjacent line, Tress passers etc.	4 days
2.	Reading of Trouble shooting directory of various three phase (inc. WAG12 etc) & conventional locomotives.	
3.	EEC & GR manual operation in Conventional loco.	
4.	Wedging of different type of relays & contactors in conventional locomotive	
5.	Flasher light – its checking procedure & usage	
6.	Precautions to be followed in case of any equipment of loco is isolated (as per TSD).	
7.	VCD act on line	
8.	Headlight not working	
9.	Horn not working	
10.	Speedometer not working	
11.	BPEMS acted on line	
12.	Operation of PTDC in three phase locomotive	
13.	Throttle not responding	
14.	Harmonic filter isolation	
15.	MR not buildup	
16.	BP/FP not creating	
17.	BP not maintaining	
18.	Working from rear cab	
19.	Fire in locomotive	
20.	Flat wheel in locomotives & precaution to avoid wheel skid, wheel slip & rail burn (Continuous wheel slip and use of sanders)	
21.	Attaching dead loco in train and accompany by ALP.	
22.	Communicating to TLC or other official regarding information of any abnormality and assistance required (protocol to be followed like train no., loco no., section, between stations, km no., nature of abnormality, assistance required, etc.)	
23.	Action in case of trouble / failures of locomotives with the help of TSD or helpline	

**Footplate /Field training as Co-ALP**

**DURATION**  
4 days

Footplate /Field training as Co-ALP for observe & learn the location and functions of various locomotive equipment and action of ALPs during normal train operation.

**DESCRIPTION**  
Train Operation Module

9873/2024

**DURATION**

7 days

Incl. Shed/field/Practical/  
Footplate**CONTENT**

Sno.	Subject	Duration in days
1.	Detection of flat wheel in loco train	3 days
2.	Train stalled on gradient section & precautions to avoid rolling down	
3.	In case of FIBA, VESDA, etc act on line	
4.	In case of Alarm Chain Pulling (ACP) in train	
5.	Brake binding in coach/wagon	
6.	Coach brake system isolation / pneumatically by pass	
7.	Train working in case air suspension bellow ruptured/punctured	
8.	Hot axle / fire in train	
9.	Walkie-talkie not working	
10.	Train working without Guard	
11.	Overview of EOTT	
12.	Hose pipe disconnection	
13.	Procedure of GDR (TMLR) check and duties of ALP	
14.	Punctuality of trains	
15.	Knowledge of WTT	
16.	Checking of coupling after attaching on load	
17.	Guard's brake valve in brake van and how to use it	
18.	All right exchange with guard at starting, curve, after passing temporary caution order, etc.	
19.	Other issued related to train operation	

**Footplate /Field training as Co-ALP****DURATION**

4 days

**Exam****DURATION**

½ day

*Exam – (AIM-12 to AIM-14).*

## DESCRIPTION

## Learning Road (LR) Module

## CONTENT

Sno.	Subject	Duration in days
1.	Importance of quality Road learning (LR) in life of running staff for ensuring safety of trains.	1 day
2.	Methodology of quality LR in main line, station sections, yards, etc.	
3.	Procedure for yard LR – on foot LR	
4.	Marking of features of sections like critical locations, signal at right hand side, signals located in curvature, heavy gradient section, etc.	
5.	Sketching of critical yard and multiple line stations.	

## DESCRIPTION

## 'KAVACH' Module

## CONTENT

Sno.	Subject	Duration in days
1.	Introduction to Kavach System Version 3.2/4.0 (Onboard and stationary Kavach) along with Video.	2 days
2.	Sealing arrangements for loco Kavach equipment.	
3.	Onboard Kavach System working on and switch off booting up produces, DMI messages & indications and train configuration.	
4.	Loco Kavach System working (All type of locos).	
5.	Differences between Kavach system Version 3.2 and version 4.0.	
6.	Kavach operation modes along with Videos.	
7.	Mode transition and responsibilities of Loco Pilots.	
8.	Brake Interface Unit (BIU) and Troubleshooting related to Kavach (All type BIUs)	
9.	Procedure for SOS generation and reception in loco Kavach.	
10.	Collision scenarios and action by loco Pilots.	
11.	Recording of Kavach incidences noticed during run in CMS and Engine book.	
12.	User Manual and Do's and Don'ts.	
13.	Limitations of Kavach.	
14.	Kavach Functionality Demonstration, DMI messages and indications and hands on training in locomotive equipped with Kavach.	

**Note :** Latest content on KAVACH as issued by IRASET, Secunderabad shall be followed.

**DESCRIPTION**9873/2024  
Simulator & Tripping Car Module**DURATION**

3 days

**CONTENT**

Sno.	Subject	Duration in days
1.	Simulator Training for application of emergency brake by trainee ALP through RS valve (each individual trainee ALP)	3 days
2.	Manual operation of GR & EEC in conventional loco tripping car (each individual trainee ALP) & Troubleshooting practice with help of TSD	

**Footplate /Field training as Co-ALP****DURATION**

4 days

Footplate /Field training as Co-ALP for observe & learn the actions of ALPs during normal train operation.

AIM-18

**DESCRIPTION**

Case Studies Module

**DURATION**

3 days

**CONTENT**

Sno.	Subject	Duration in days
1.	Discussion on issues noticed during footplate training	3 days
2.	<b>Case Studies</b> of various accidents and lessons linked with various above modules. (Particularly focusing on scenarios where prompt actions by ALPs could have averted the incidents or accidents.)	
3.	Revision of important safety instructions, procedures, etc.	
4.	Summarizing the importance and procedure of quality road learning to ensure safe train operation.	
5.	Session on personal hygiene and importance of clean environment & stress management during any unusual.	
6.	How to submit a memo to the section controller/TLC through SM/ASM for any information required to be brought to notice.	
7.	Important dos & don'ts like switching off of mobile phone, not to use walkie-talkie for getting information of signal aspect from station staff, drunkenness on duty, etc. Any other topic deemed fit to be imparted to trainee ALPs.	

**DESCRIPTION**

Final Exam covering all modules

**DURATION**

1 day

need to undergo requisite Traffic Transportation training.

- Classroom training to have audio-visual aids with digital content.
- Deep knowledge of circuits (electrical or pneumatic), etc is not required.
- Training should primarily emphasize on responsibilities/duties of the ALP, requirements of rules / regulations / discipline in day to day operation.
- While preparing question papers for examinations, the focus should preferably be on the duties of the ALP and the activities they perform during train operations, as well as the procedures encountered in day-to-day working, rather than on the technical data of the locomotive.
- During subject-specific classroom training, it is essential to emphasize discussions on safety cases, including SPAD, accidents, derailments, collisions, side collisions, and incidents involving entering unwired/sand humps. This emphasis should highlight how adherence to proper procedures or correct actions by the ALP on the subject could have effectively prevented such cases.
- For effective monitoring of footplate training by trainee Assistant Loco Pilots (ALPs), temporary IDs should be created in the CMS (CMS software may need modification). Subsequently, trainee ALPs should be scheduled as additional ALPs within the regular loco crew roster during normal train bookings.
- A minimum of 1000 kilometers of footplate experience is recommended.
- Proper records of footplate kilometers of individual trainee ALPs should be kept by the concerned training center. The record of footplate kilometers should also be maintained in CMS.
- While foot-plate the trainee should act like an observer only. He/she shall not interfere with activities of crew. He/she shall NOT be held responsible for lacunae in any routine/defined duties of crew in case of any untoward incident, etc.
- To enhance understanding of the working system, it is suggested that during footplate training, trainee ALPs may be assigned to lobbies and booked as additional ALP with the regular set of crew (preferably on lobbies where they are expected to work upon completion of their training).
- After being assigned to the lobby, trainee ALPs may be directed to undergo footplate training as Co-ALP (with the regular set of loco crew) for completing at least two round trips in each section of the specific lobby (crew beat) and also stay in running room to the extent possible.
- Trainee ALPs may also be allowed to stay in running rooms so that they can gain footplate experience up to the full crew beat along with the train crew. This will also enable them to familiarize themselves with the running room system of working. (In the case of regular ALPs undergoing conversion training, this aspect is not required.)
- Furthermore, any outstanding topics relevant to the assigned duties should be integrated into the training curriculum as necessary.

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