



दक्षिण पूर्व मध्य रेलवे
SOUTH EAST CENTRAL RAILWAY
मंडल कार्यालय DIVISIONAL OFFICE
कार्मिक विभाग PERSONNEL DEPARTMENT,
किंग्सवे , नागपुर KINGSWAY, NAGPUR -440001

NOTIFICATION No. 01/2024

No. P/NGP/ENGG/Inst(P.Way)/2024/01

Date: 9.2.2024

(Estt Rule No. 141/19,194/2018, 72/2020, 359/2018, 164/2019, 315/2019 ,15/2021)

Applications are hereby invited for filling up of the non-gazetted posts of Instructor(P.Way) of Engineering Department in Pay-Matrix Level-7 in SCETC/Nainpur and DETS/DGG over Nagpur Division.

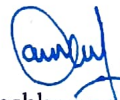
Closing Date of application	:	20.02.2024
Name of the post	:	Instructor (P.Way) of Engineering Department /Pay-Matrix Level-7
Number of vacancies	:	03
Eligible staff	:	P.Way staff of Level-7 & Level-6 of Engineering Department may apply. The priority will be given to Level-7 only. However, Level-6 of P.Way may also be considered when there is no willing candidate of level-7.
Eligibility conditions	:	i) The candidate should have completed at least 02 years of regular service on the date of notification. ii) The candidate should exclusively from engineering department. iii) Upper Age Limit - 58 years on the date of notification. (born before 8.2.1966)
Terms and Conditions	:	i) Tenure of the Instructor will be minimum 3 years and maximum 08 years in the Training Institute. ii) Selected candidates can be posted in either of the training centres. iii) Selected candidates for the post of Instructor will only be paid Teaching Allowance @ 12% of basic pay of selected staff. iv) Cooling off period between 02 tenures (as Instructor of Training Institute) should be atleast one year.
Mode of Selection	(A)	WRITTEN EXAMINATION: i) Examination will be on Computer Based Test(CBT) Mode. ii) All Questions will be of Multiple objective Questions (MCQ). iii) Total No. of questions will be 83 (including 08 questions from Rajbhasha). However, candidates have to answer any 75 questions. iv) Each question will carry 01 mark.

Contd...on..page..2

[Signature]

		v) There will be Negative marking @ 1/3 against every wrong answer
		vi) Qualifying marks for written examination will be of 60%.
	(B)	<u>CLASS-ROOM LECTURE TRIAL:</u> (i) Candidate who scores 60% of marks in written examination will be called for class-room lecture trial to adjudge professional ability.
Total Marks of Examination	:	75 marks (written examination) 25 marks (class-room lecture)
Publication of Panel	:	Panel will be prepared exclusively based on the <u>Order Of Merit</u> as per the score obtained in written and Class-Room lecture trial.
General Instructions	:	i) Candidate should/must apply in the given format (attached) duly signed by the Controlling Officer(ADEN/DEN/Sr.DEN) etc.
		ii) All applications in proper format duly forwarded by the Controlling Officer should/must reach in Sr.DPO's office on or before 20.2.2024.
		iii) Applications can also be sent to Sr.DPO's office through e-mail(srdponagpur@gmail.com) in pdf format.

Encl: i) Proforma application.
ii) Syllabus.


 (Kamleshkumar R. Dorkar)
 Assistant Personnel Officer-III
 For Sr.DPO-SECR-Nagpur

ANNEXURE 'A'**PROFORMA**

Passport-size
Photo to be
pasted here

APPLICATION FOR THE POSTS OF INSTRUCTOR (ENGG-P.WAY) IN PAY MATRIX
LEVEL-7, UNDER SCETC/NIR & DETS/DGG OF NAGPUR DIVISION.

S.N.	Particulars	Details
1	Name of the Applicant	
2	Designation	
3	PF No.	
4	HRMS ID	
5	Present Pay Level (Level-7/Level-6)	
6	Place of current posting/unit	
7	Date of Birth (As per Railway service record)	
8	Date of Appointment in Railway.	
9	Educational/Technical Qualification	
10	Bill Unit No.	
11	Mobile No.	

:: DECLARATION ::

I.....Desig..... hereby declare that I have gone through the terms & conditions of notification issued for the post of Instructor and understood clearly. I also declare that I am free from any D&A/SPE/Vig cases.

I , also declare that the above information given by me is true/correct as per my knowledge.

Date:

(Signature of the Applicant)

Name:

Shri is free from any D&A case as of now.

Sign & Name of Supervisor

Forwarded

Sign. & Name of Controlling Officer with seal.

Annexure-B

Proposed Syllabus for Selection of Instructor (P.Way) at Railway Training Institute (Based on Training Module prepared by IRICEN,Pune and issued by Railway Board Vide letter no. E(MPP)/2019/03/46 dated 24.12.2021
 " The syllabus shall be according to the IRPWM-2020 along with all correction slips to IRPWM-2020 "

TOPIC	TOPIC DETAILS
	PART I-ORGANIZATION OF RAILWAYS
1.1	Overview of organization of Railways. Different Gauges. Classification of Routes. Role of JE/SSE in the organization.
	PART II-TRACK COMPONENTS
1	RAILS :
1.1	Rail, different types of rail section, various types of standard of loadings.
1.2	Sectional properties Standard sections, grade, UTS & service life, classification. Rolling marks. Colour coding of rails
1.4	Instruction for handling of rails.
1.5	Straightening of rail kinks by Jim crow & precautions while using Jim Crow.
1.6	Corrosion of rails & methods for anticorrosion treatment of Rail.
1.7	Wear of Rail & its causes.
2	RAIL JOINTS :
2.1	Different types of fish-plates : 610mm fishplate, 1m long fish plate. Combination fish-plates. Skimmed fish-plates. Different types of fish-bolts. anti-sabotage fish-bolts. Chamfering of bolt holes.
2.3	Glued joints (in situ/ prefab), ordinary insulated joints (BJ).
2.5	Rail unloading by End Unloading Rake (EUR) and related precautions
2.6	Technical Film/Video clip Photographs - Glued Joint, block joint, etc.
2.7	Technical Film/Video clip-Photographs - Rail handling. Drilling of holes, Chamfering of holes. Unloading of Rails by EUR, rail grinding machine.
3	SLEEPERS
3.1	Functions of sleepers, various types of Sleepers including composite sleepers
3.2	Concrete sleepers. Mono-block PSC Sleeper. Special sleepers for L-xings, turnout, S&J, bridges approach, slack gauge sleepers for curves (more than 4°), special sleepers for sharp curves (more than 8°), wider sleeper. Sleeper density on different routes.
4	FASTENINGS FOR PSC SLEEPERS
4.1	Malleable cast iron inserts Elastic Rail Clips: Various types – ERC mark III, mark V, zero toe load, GJ clip. Toe load measurement of ERC. Criteria for ERC renewal. Rubber pads: Different types. Liners : Different types, GFN liners, metal liners, combination liners Anti-sabotage arrangements for various sleepers. Creep anchors, method for fixing, Box anchoring. Recent developments in new types of ERC, Liner, Rubber pads Modern elastic fastenings viz. Vossloh, Nabla etc

TOPIC	TOPIC DETAILS
5	BALLAST :
5.1	Functions of Ballast.
5.2	Ballast profile - Ballast sections for straight and curves on single/double lines, for BG/MG/NG with fish plated track, SWR and LWR.
5.3	Specification for track ballast, measurement & testing of ballast, training out Ballast, DMT Operation
5.4	Assessment of ballast requirement
6	FORMATION:
6.1	Functions of Formation
6.2	Formation profile for bank and cutting including side and catch water drains
6.3	Causes for formation failure (Rehabilitation of weak formation) including case studies
	PART III- TRACK STRUCTURE
1	TURNOUTS - INTRODUCTION
1.1	Turnouts, Definition and description of components.
1.2	Basics of Railway Horizontal Curves including working out speed potential of curves.
1.3	Different types of turnouts : 1 in 8.5, 1 in 12 & 1 in 16 Different types of switches - straight switches, Curved switches, Thick web switches, Derailing switches, symmetrical split Different types of crossings - ordinary built-up and CMS crossings, swing nose crossing, gapless/machine joint, Spring points, Speed potential, permissible speed of turnout.
2	TURNOUTS - ASSEMBLY & LAYING
2.1	Main dimensions of different types of turnouts, marking/ verification of cumulative spacing of turnout sleepers, assembling of turnouts.
2.2	Contrary and similar flexure turnouts: Definition, Calculations for lead & radius.
2.3	Laying & Maintenance of fan shaped turnouts, maintenance of turnouts in curves, turn in curves, laying and maintenance of spring setting device.
3	CROSSOVERS - LAYOUT CALCULATIONS
3.1	Calculation for laying cross over, Cross over between straight parallel tracks with same & different no. of crossings.
3.2	Cross over between curved parallel tracks, Cross over between inclined tracks.
3.3	Special layouts: Diamond crossings including with single and double slips, Scissors crossover, Definitions and description of components.
3.4	Gathering lines, Xing angles and limiting angle layouts.
3.5	Calculations for different turnouts and spacing, Miscellaneous layouts: (1) Triangle (2) Double junctions (3) Gauntlet track (Brief description).

Amf

TOPIC	TOPIC DETAILS
5	BALLAST :
5.1	Functions of Ballast
5.2	Ballast profile - Ballast sections for straight and curves on single/double lines, for BG/MG/NG with fish plated track, SWR and LWR.
5.3	Specification for track ballast, measurement & testing of ballast, training out Ballast, DMT Operation
5.4	Assessment of ballast requirement
6	FORMATION:
6.1	Functions of Formation
6.2	Formation profile for bank and cutting including side and catch water drains
6.3	Causes for formation failure (Rehabilitation of weak formation) including case studies
	PARTIII- TRACK STRUCTURE
1	TURNOUTS - INTRODUCTION
1.1	Turnouts, Definition and description of components.
1.2	Basics of Railway Horizontal Curves including working out speed potential of curves.
1.3	Different types of turnouts : 1 in 8.5, 1 in 12 & 1 in 16 Different types of switches - straight switches, Curved switches, Thick web switches, Derailing switches, symmetrical split Different types of crossings - ordinary built-up and CMS crossings, swing nose crossing, gapless/machine joint, Spring points, Speed potential, permissible speed of turnout.
2	TURNOUTS - ASSEMBLY & LAYING
2.1	Main dimensions of different types of turnouts, marking/ verification of cumulative spacing of turnout sleepers, assembling of turnouts.
2.2	Contrary and similar flexure turnouts: Definition, Calculations for lead & radius.
2.3	Laying & Maintenance of fan shaped turnouts, maintenance of turnouts in curves, turn in curves, laying and maintenance of spring setting device.
3	CROSSOVERS - LAYOUT CALCULATIONS
3.1	Calculation for laying cross over, Cross over between straight parallel tracks with same & different no. of crossings.
3.2	Cross over between curved parallel tracks, Cross over between inclined tracks.
3.3	Special layouts: Diamond crossings including with single and double slips, Scissors crossover, Definitions and description of components.
3.4	Gathering lines, Xing angles and limiting angle layouts.
3.5	Calculations for different turnouts and spacing, Miscellaneous layouts: (1) Triangle (2) Double junctions (3) Gauntlet track (Brief description).

Amu

TOPIC	TOPIC DETAILS
	PART I- ORGANIZATION OF RAILWAYS
1.1	Overview of organization of Railways. Different Gauges. Classification of Routes. Role of JE/SSE in the organization.
	PARTII-TRACK COMPONENTS
1	RAILS :
1.1	Rail, different types of rail section, various types of standard of loadings.
1.2	Sectional properties Standard sections, grade, UTS & service life, classification, Rolling marks. Colour coding of rails
1.4	Instruction for handling of rails.
1.5	Straightening of rail kinks by Jim crow & precautions while using Jim Crow.
1.6	Corrosion of rails & methods for anticorrosion treatment of Rail.
1.7	Wear of Rail & its causes.
2	RAIL JOINTS :
2.1	Different types of fish-plates : 610mm fishplate, 1m long fish plate, Combination fish-plates, Skimmed fish-plates, Different types of fish-bolts, anti-sabotage fish-bolts, Chamfering of bolt holes.
2.3	Glued joints (in situ/ prefab), ordinary insulated joints (BJ).
2.5	Rail unloading by End Unloading Rake (EUR) and related precautions
2.6	Technical Film/Video clip Photographs - Glued Joint, block joint, etc
2.7	Technical Film/Video clip Photographs - Rail handling, Drilling of holes, Chamfering of holes, Unloading of Rails by EUR, rail grinding machine.
3	SLEEPERS
3.1	Functions of sleepers, various types of Sleepers including composite sleepers
3.2	Concrete sleepers, Mono-block PSC Sleeper, Special sleepers for L-xings, turnout, SEJ, bridges approach, slack gauge sleepers for curves (more than 4°), special sleepers for sharp curves (more than 8°), wider sleeper, Sleeper density on different routes.
4	FASTENINGS FOR PSC SLEEPERS
4.1	Malleable cast iron inserts Elastic Rail Clips: Various types – ERC mark III, mark V, zero toe load, GJ clip. Toe load measurement of ERC. Criteria for ERC renewal. Rubber pads: Different types. Liners : Different types, GFN liners, metal liners, combination liners Anti-sabotage arrangements for various sleepers, Creep anchors, method for fixing, Box anchoring. Recent developments in new types of ERC, Liner, Rubber pads Modern elastic fastenings viz. Vossloh, Nabla etc

Handwritten signature

TOPIC	TOPIC DETAILS
4	TRACK STRUCTURE IN YARDS
4.1	Track Structure in yards: Simple station layouts, loop lines, gathering neck, stabling lines, overrun line, shunting neck, hot axle fuel lines, machine siding etc.
4.2	Isolation derailing switch, Sand hump, dead ends, Catch siding, slip siding.
4.3	Restriction in use of 1 in 8 1/2 turnouts on passenger lines.
4.4	Restrictions regarding change of grade on approaches of turnout.
4.4	Fouling marks, distance pieces to platform lines
4.6	General requirement of P-way Materials for 1km track
4.7	Strengthening of loop lines for 30kmph 50kmph
5	LEVEL CROSSINGS
5.1	Level crossings: Classification, types.
5.2	Normal Position of Gates, Locking arrangement.
5.3	Equipment at LC
5.4	Features of track at and on approaches of level crossings, overhauling of LC, Maintenance of road surface and approach track, Check rails-types, Visibility at LC
5.5	Checking of equipment and knowledge of rules of gatemen, competency, medical, Refresher Statutory provisions of Railway Act on LC, GWR Protection diagram, Slide boom operation, Height gauge
5.6	Inspection of L-xing, Duties of gatekeeper in case of fire, Hot axle, train parting, hanging part, flat tyre.
5.7	Speed breakers, Road sign Boards, Provision of new LC, Manning, De-manning, interlocking and replacement with ROB, closure, shifting and replacement with limited height subways/ RUBs, Elimination of LC.
6	BRIDGES & TRACK STRUCTURE ON BRIDGES
6.1	Bridges, Classification, Types, Track Structure on girder Bridges, ballasted decks, arch bridges, provision of guard rails, re-railing ramps
6.2	Steel channel sleeper, H beam sleeper, composite sleeper
6.3	Laying and maintenance
6.3	Inspection and Maintenance of bridges, Numerical Rating
6.4	System Dismantling of Arch Bridges
6.4	Attention to approach track & strengthening, Cleaning of waterway, Checking guardrails, Painting of HFL, DL & flood gauge, bridge name board
6.6	Insertion of RH girder and laying of CC cribs
7	TUNNELS
7.1	Various components, track structure including guard rail, inspection.
	PART IV- WELDED RAILS
1	WELDING OF RAILS
1.1	Necessity of welding rail joints, ill effects of joints.
1.2	SKV, Wider gap Welding, compressed air preheating, 3 piece mould AT welding technique, New development in AT-weld
1.3	Precautions to be observed during AT weld for good quality Competency & training requirement of welder & supervisor, Selection of rails for welding.

Amf

1.4	Tolerances for finished A.T. welds & FB Welds.
1.6	Flash Butt welding. Testing of FBW welds. Mobile flash-butt welding Planning & executing of TWR with MOBILE FBW PLANT including tender schedule, specifications & conditions
2	SHORT WELDED RAILS (SWR)
2.1	Definition. Track Structure for SWR.
2.2	Conditions of laying. Maintenance of SWR.
2.3	Tutorial on- Gap survey & adjustment of gap
3	LONG WELDED RAILS (LWR)
3.1	Definitions theory, concept of LWR. Historical development
3.2	Various types of Rail thermometers.
3.3	Permitted locations for laying. Track Structure, Laying of LWR.
3.4	Different types of SEJ
3.5	De-stressing: Criteria for destressing, method of destressing without tensor/ with rail tensors.
3.6	Repairs of Rail fracture.
3.7	Repairs of buckling.
3.8	Regular track maintenance operations on LWR
3.9	Special track maintenance on LWR
3.10	Cold & hot weather patrolling
3.11	Inspection of LWR and remedial actions for correction of gaps at SEJ. Hysteresis loop
3.12	Competency level to carry out various works in LWR track. Dos & Don'ts.
4	USFD
4.1	Different types of Rail flaws/ defects.
4.2	Rail Fracture- Codification of Rail Defects
4.3	Preservation of fractured pieces for testing.
4.4	USFD: Ultrasonic flaw detection, fundamentals of ultrasonic waves, defect detection, need based concept of USFD, frequency of testing, brief description of various types of USFD machines and probes used, calibration and sensitivity checking, limitations of USFD, USFD Flaw /defect, marking of defects. Action to be taken for different Rail/Weld USFD flaws. SPURT Car. Recent developments.
	PART V - INSPECTION AND MAINTENANCE OF P.WAY
I	INSPECTION AND DUTIES
1.1	Duties of track maintainer
1.2	Duties of Key man.
1.3	Duties of Mate.
1.4	Duties of JE/P. Way.
1.5	Duties of SSE/P.Way.
1.6	Inspection schedule of JE/P.Way/SSE/P.WAY (sectional)
1.7	Inspection schedule of SSE/P.WAY (Incharge)
1.8	Items to be inspected during Push trolley, motor trolley, on foot & footplate inspection

any

2	MAINTENANCE OF TRACK
2.1	Annual programme for regular Track maintenance
2.2	Maintenance planning
2.3	Through packing
2.4	Overhauling
2.5	Record of Gang work, Gang chart diary, Keyman's diary, Mate's diary, Record of work of Artisans and other workmen.
2.6	Half yearly reports on conditions of permanent way, PWT's Section Register, P. Way plans and diagrams
2.7	Deep screening of ballast
2.8	Lubrication of joints and lubrication of rails in straight on work spot and on curves, maintenance of rail joints, lubrication on switches, lead rails
2.9	Picking of slacks
2.10	Cleaning of drains and water ways, inspection of cutting, removal of loose boulders
2.11	Prevention of creep, Creep anchors, Anti-creep fastenings, Measurement of creep, Markers, Creep registers, Creep adjustment, Adjusting joint sleepers.
2.12	Lifting and lowering of track
2.13	Special attention to maintenance of platform lines and drainage, maintenance of apron.
2.14	Maintenance in electrified areas: Basic knowledge of OHE, Special instructions to staff working in traction area, Felling/Cutting/pruning of trees very close to OHE.
2.15	Working in track circuited areas - maintenance of track circuited sections, use of insulated trolleys, Gauges and other tools, maintenance of insulated joints, glued joints, Felling/Cutting/pruning of trees obstructing view of signal, Coordination with signal and operating departments
3	MECHANIZED MAINTENANCE
3.1	3 tiers system of track maintenance, Working of MMUs
3.2	Small track machines: types, use in maintenance, spot attention with off track tampers, Troubleshooting and system of repairs & maintenance, procurement, Recent developments in light weight small track machines
3.3	Introduction to different types of track machines viz. Duomatic, CSM, tamping express, DTS, Unimat, BRM, FRM, BCM etc.
3.5	Working rules for track machines (IRMM chapter 4, para 4.5-4.10)
3.4	Pre-requisites to tamping and other machine working, Pre & Post tamping attentions and attentions during tamping.
3.5	Working principles of tamping machine - 3 point & 4 point lining including working of ALC, DRP, CWS, CMS
3.6	Deep screening of ballast with BCM machine.
4	RECONDITIONING OF MATERIALS AND TOOLS
4.1	Reconditioning of P. Way materials, Rails, Welding of scabbed rails
4.2	Repressing of fishplates, Use of shims, Beaters etc,
4.3	Reconditioning of worn out crossings and switches, type of electrodes used, RDSO approved vendor and welder system, Translamic robotic welding- planning, execution including schedule, conditions & specifications.

Amul

5	TOOLS & EQUIPMENTS
5.1	Measuring tools, Pway inspection kit & its demonstration
5.2	Regular Maintenance Tools.
	PART VI- SAFETY
1	TROLLEY/LORRY/DOLLY WORKING
1.1	Distinction between Trolley, Lorry & motor Trolley.
1.2	Competency Certificate
1.3	Working of Push Trolley, Lorry & motor Trolley, its equipment Working of Material tram, Working of Rail Dolly and its protection arrangement
1.4	Trolley Refuges
2	PROTECTION, RESTRICTIONS & INDICATIONS
2.1	Hand signals in day and night, Hand flags, Hand lamps, Banner flags, Detonators, life of detonators, testing, fog signals.
2.2	Model room demonstrations of hand flags, lamp, banner flags, detonators, etc.
2.3	Engineering, Indicators, Temporary and permanent.
2.4	Works of short and long duration, Protection arrangements during emergency, during traffic block/road vehicle working adjacent to track/during poor visibility and Caution order
3	PATROLLING
3.1	Necessity of patrolling.
3.2	Kinds of patrolling i.e. Key men's daily patrol, Gang patrol, Monsoon security, Hot and cold weather patrolling, Watch at vulnerable points, Weather warnings, Single and double shift patrolling.
3.3	Patrol charts, Patrol books and equipments, selection and duties of patrolmen.
3.4	Night checks & Inspections
4	CRS SANCTION & SCHEDULE OF DIMENSIONS
4.1	Track Works requiring CRS sanction, Procedure for getting CRS sanction.
4.2	Various schedules of dimensions related to P. Way
4.3	Infringements, Register of infringements
4.4	Movement of ODC
5	DIVERSIONS
5.1	Definition, Types of diversions.
5.2	Standard for laying diversions.
TOPIC	TOPIC DETAILS
	PART IX-CURVES
1	HORIZONTAL CURVES
1.1	Types of curves, Degree of curve, Relation between degree & Radius, Chord and Versine, Standard chords for measuring Versine.
1.3	Super elevation / equilibrium cant, Maximum cant for normal and high speed trains, Cant deficiency and cant excess, Formula for safe speed on curves, Equilibrium speed, Calculation of cant to be provided and permissible speed, Transition length, Maximum cant gradient, Rates of running out of cant and cant deficiency.

Handwritten signature

	grade compensation
1.4	Miscellaneous - Running out cant on transitioned curves, laying of rails on curves, Mid stagger joints on sharp curves, Rail posts and Curve boards (IRPWM Para 409), Lubrication of outer Rails on curves, Check rails on sharp curves.
1.5	Widening of gauge on curves, Extra clearance on curves. Minimum length of straight between Reverse Curves.
1.6	Curves with similar and contrary flexure, Calculation of cant to be provided and permissible speed, Curve with X-over and diamonds
1.7	Tutorial on design of curve based on 1.7 above.
2	VERTICAL CURVES
2.1	Need for vertical curve.
2.2	Tutorial on working out geometry of vertical curve.
3	REALIGNMENT OF CURVES
3.1	Re-alignment of curves, String lining of curves, Need for curve adjustment.
3.2	Criteria for curve realignment.
3.3	Calculations of slews by second summation method.
3.4	Steps involved in curve realignment
3.5	Curve realignment - working out slews using software
	PART X- SURVEYING
1.1	Concept of survey and modern surveying instruments.
1.2	Introduction of total station (concept, uses and equipment)
1.3	Curve setting by Theodolite/Total Station.
	PART XI- TRACK RENEWALS
1.1	Scope and criteria for Complete track renewals (CTR), Through rail renewals (TRR), Through Sleeper renewals (TSR), Through fitting renewal (TFR) and through ballast renewal (TBR), Throughbridge timber renewal (TBTR), Through turnout renewal (TTR), Through weld renewal (TWR).
1.2	Casual renewals of rails, sleepers, fastenings etc.
1.3	Methods of renewals: Planning for track renewal work including material planning, requirement of tools and plants, track machines, traffic blocks and speed restrictions. New Track Laying Standards, Protection of site -- safety precautions during work.
1.4	Project report for Track Renewal works - IRPWM Para 309
1.5	Release material handling: Picking of released materials, Classification & disposal. Handing over & taking over of assets between construction & open lines.
1.6	Mechanized track renewals - Relaying with PQRS Track relaying train (TRT), Relaying of turnout with T-28.
	PART XII- TRACK MANAGEMENT SYSTEM (TMS)
1.1	Introduction to IRICEN Website and assessing the various publications and knowledge bank, Introduction to various modules of IRCEP, TMS- Purpose & Advantage

Amul

	TMS- Asset Creation including Hands-on (Rail, Joints, Welds, Sleepers and Fastenings, SEJ, LWR, P&C, Curve & LC).
1.2	Generation of various Report and Registers. Track Diagram
1.3	Asset change module (Rail, sleeper, ballast, LC & P&C etc
1.4	Fracture Entry, USFD entry & Weld/Rail fracture reports
1.5	Store Module.
1.6	Misc Module.
	PART XIII- TRACK RECORDING & MONITORING
1.1	Track Parameters for track monitoring including Various Track Tolerances.
1.2	Method of Inspection: Push trolley, Motor trolley, Foot inspection, Engine & Rear van Inspection, TRRC, Oscillograph car, OMS, SPURT Car
1.3	Frequency of inspection with various track recording modes (TRC, OMS, Oscillograph car).
1.4	Action to be taken based on various inspection including Track Recording results & based on TMS Reports.
	PART XIV- ACCIDENTS & DISASTER MANAGEMENT
1.1	Duties of JE/ SSE /P. Way in disaster management.
1.2	Classification of accidents.
1.3	Responsibility of P.Way staff on sounding of hooters, action to be taken on reaching accident site: First aid, Preservation of clues, Assessment of men and materials for restoration, Recording site and track particulars, Preparation of a sketch, Preparation of joint note, Expeditious restoration.
1.4	Drivers reports on bad riding and action to be taken
1.5	Breaches & its types, Prevention & action during breach, Action with regard to Railway Affecting tanks, Engg. material in ART.
1.6	Rail wheel interaction- theory.
	PART XV- LAND MANAGEMENT
1.1	Land acquisition.
1.2	Demarcation of land boundaries and maintenance of land registers
1.3	Licensing leasing, Way Leave Facility, NOC to Private Party/ Builder for building near Railway Boundary
1.4	Relinquishment of railway land.
1.5	Type of encroachments and PPE Act.
	PART XVI- OFFICE & STORES
<u>1</u>	<u>STORES</u>

1.1	Procuring of office stationary and stores, Procuring of P. Way stores for maintenance and for special works, Classification of stores, Accountal of stores, DS- 8 note, BE-9B, Matenal Transacation Order, Adjustment Memo, Stock verification reports, Disposal of Scrap & surplus stores, Overhauling of stores, Numerical ledgers & inventory control.
-----	---

1.2	Classification of stores, Stock Verification, Stock Sheet, Submission of Returns, Inventory control, Maintenance of DMTR and Ledgers, Submission of Store returns in time, Materials at Site register. Imprest Store. T&P Store.
1.3	Functioning of Divisional Stores Depots and Track Depot. Requirement of Material for casual renewal and sanctioned renewals. Working out list for track material. Proper care & upkeep of store, environmental management Improvement of Store & depot including cleanliness, hygiene. afforestation, rain Water harvesting, energy conservation etc.
2	PERSONNEL
2.1	Muster Pay Sheet. VIIth Pay commission pay levels. Allowances.
2.2	Wage period. Bill preparation, Filling up of TA & OT Journals.
2.3	Passes and leave Rules.
2.4	Medical Assistance and Medical Examination Rules.
2.5	Establishment Records in SSE, JE P.Way office
2.6	Industrial Relations:- Unions & Associations. PNM, JCM
2.7	Railway Services (Conduct) Rules, D&A Rules
2.8	Payment of Wages Act, Minimum Wages Act, Contract Labour Act
2.9	Workmen's Compensation Act. Action in case of injury/death on duty, Ex-Gratia Payment.
2.10	RTI Act-Important Previous.
2.11	Prevention of trespass, Disposal of human bodies run over. Disposal of cattle found dead on the line, Performa for lodging FIR, miscellaneous
3	RAJBHASHA
3.1	Directives in use of Raj Bhasha in day-to-day working.
	PART XVII- CONTRACT MANAGEMENT
1.1	Various registers to be maintained for progress, Quality Safety of contractors persons, Safety measures at work site.
1.2	Accountal of new and released material, Issue and receipt form contractors, Important points from vigilance angle.
1.3	Preparation of Contractor's On-Account/Running & Final Bill Material Statements, maintenance period, Warranty guarantee Clauses, release of security deposit.
1.4	Time extensions to date of completion of contract, Variations in Contract Quantities and Subsidiary Agreement.
1.5	Supervision of contractual works, Common ignorance, Dos & Don'ts for contract matters.
1.6	Duties towards payment to contractor's labour and maintenance. Of records as per labour laws.
	PART XVIII – TRANSPORTATION-I (G&SR)
1.1	Various system of working, Essentials of Absolute & Automatic Block system.
1.2	Classification of Stations, Simple layouts & condition for granting permission to approach. Single line working on double line. Reception of train on blocked line and starting from non-signaled line. All Communication Failure (ACF), Interlocking, Recovery Time.
1.3	Important definitions, General & Subsidiary Rules applying to Railway Servants.
1.4	Signals, General Provisions. Description of fixed signals. Hand
1.5	Signals, Detonating signal flare signal. Defective fixed Signal. Rules for passing defective signals.
	PART XIX – COMPUTER
1.1	Hands on : MS-Office, Word, Excel, Power Point, Search Engines, Email.