

Class-Time Table

Session – AJE 2nd (11.08.2025 to 04.10.2025) No of Trainees - 27 Batch – B-13, AJE/25-26/01, AJE/25-26/02 & AJE/25-26/03 Course Coordinator – Shri Manish Kumar (B-13 only) Shri Adnan Husain									
Days/Period	I (09:40-10:40)	II (10:40-11:40)		III (11:55-12:45)	IV (12:45-13:30)		V (14:30-15:45)		VI (16:00-17:00)
Monday	AH	ALS	Tea Break 11:40 to 11:55	AY	NCJ	Lunch 13:30 to 14:30	ADS	Tea Break 15:45 to 16:00	ANS
Tuesday	RCS	AK		MK	AY		AH		Lab/Library
Wednesday	ADS	ANS		RCS	AK		MK		AM
Thursday	NCJ	AK		ALS	AY		ADS		ANS
Friday	AM	MK		ALS	NCJ		RCS		श्रमदान
Saturday	AY	AH		AK	AM				

(N.C.Jaiswal)

Sr.Lecturer & Course Director/STC/CB

Faculty Name & Code

1. **NCJ** ----- Sri Naveen Chandra Jaiswal
2. **ADS** ----- Sri Adarsh Soni
3. **RCS** ----- Sri Ratnesh Srivastava
4. **MK** ----- Sri Manish Kumar
5. **AH** -----Sri Adnan Husain
6. **AY** -----Sri Anuj Yadav
7. **ALS** -----Sri Alok Kumar Srivastav
8. **ANS** --- ---Sri Anurag Singh
9. **AK** -----Sri Anurag Kushwaha
10. **AM** ----- Sri Arvind Maurya

MODULE & CODES

SL. NO.	Name of Post	Stream	Module No.	Duration in Weeks
1	Sr. Section Engineer	C&W	MSE-C	52
2	Sr. Section Engineer	Diesel	MSE-D	52
3	Sr. Section Engineer	Workshop	MSE-W	52
4	Junior Engineer (RRB)	C&W	MJR-C	52
5	Junior Engineer (RRB)	Diesel	MJR-D	52
6	Junior Engineer (RRB)	Workshop	MJR-W	52
7	Junior Engineer	C&W	MJI-C	52
8	Junior Engineer	Diesel	MJI-D	52
9	Junior Engineer	Workshop	MJ1-W	52
10	Junior Engineer	C&W	MJP-C	13
11	Junior Engineer	Diesel	MJP-D	13
12	Junior Engineer	Workshop	MJP-W	13

Module Code

1. M Mechanical
2. SE Section Engineer
3. JR JE- RRB
4. JI JE- Intermediate
5. JP JE-Promotional
6. C C&W
7. D Diesel
8. W Workshop

Subject Code

1. M Module
2. R Railway
3. E Engineering
4. T Theory
5. C C&W
6. D Diesel
7. W Workshop

Subjects & Faculty

Shri. Manish Kumar (Ch - 1 to 7), Shri Ratnesh Srivastava (Ch - 8 to 13).

SUBJECT NAME	TENDERS & CONTRACT MANAGEMENT
SUBJECT CODE	MRT-07
MODULE	MSE, MJR & MJI

SL NO.	TOPIC	TIME IN HRS
1	Introduction on Estimate preparation to sanctioning and from Detailed Estimate to entering into contract agreement	02
2	Overview of contract management	02
3	Types of contracts, revenue contracts / work contracts, schedule of powers for approval of works, works programme	03
4	Service Contracts, GCC for services, SBD	03
5	Initiation of tenders, Types of tenders, Selection of tenders Sanction to float tender & Tender notice	03
6	Preparation of tender documents, Elements of tender document, General conditions of contract, Special conditions of contract, Tender rules and clauses	03
7	Awareness about features of IREPS, Tender opening and processing, Opening of tenders, Tabulation statement & Briefing note	03
8	Finalization of tenders - Technical evaluation, Tender committee nomination, Tender committee deliberations and recommendations	03
9	Awarding of Contract, Acceptance of tender, Issue of letter of acceptance & Starting of contract	03
10	Execution of Contract- Fulfillment of contract obligations, Inspection of work, Record of work done, Payment to the contract & Monitoring of progress, Shramik kalyan portal	03
11	Vigilance angle to contracts, Do's and Don'ts, Arbitration	02
12	Case Studies, cases in workshops, open line & Diesel Sheds, Mechanized Laundry Contract under BOOT model	04
13	Review	02
	Total	36

SUBJECT NAME	MANAGERIAL SKILLS
SUBJECT CODE	MRT-09
MODULE	MSE, MJR & MJI

SL NO.	TOPIC	TIME IN HRS
1	Leadership	12
2	Motivation	06
3	Communication Skills	09
4	Time Management	03
5	Stress management	03
6	Ethical Decision-making	03
7	Computer Applications: Word, Excel, Power Point; including Hands on in Computer Lab	09
8	Project management Concepts	15
9	Teamwork & Teambuilding	06
10	Negotiations	06
	Total	72

Shri. Naveen Jaiswal (Ch-1 & 2), Shri Arvind Maurya (Ch - 3 to 5),

Shri Anuj Yadav (Ch - 6 to 11),

SUBJECT NAME	Welding and Non-Destructive Testing
SUBJECT CODE	MRT-10
MODULE	MJR & MJI-W

SL NO.	TOPIC	TIME IN HRS
1	Welding - Principle and applications in various fabrication work, different types of Welding Processes, Weldability of material (MS & SS) and Welding metallurgy	03
2	Arc welding process and principle, tools required for Arc welding, Setting welding current & voltage, Maintenance of welding machine, SS Welding, Welding of dissimilar metals	06
3	Job preparation, Electrodes, Electrode selection for difference welding work, Types of Joints, Welding Symbols used in Drawings	03
4	Safety precautions, Do's & Don'ts	02
5	Special Welding Techniques: CO ₂ welding- Method, precautions etc.; C.I. welding; MIG & TIG welding work; seam welding; submerged arc welding; flash butt welding	06
6	Different Cutting and Gauging Processes, Plasma Cutting: Electrode Arc Cutting, OA Cutting, Laser Cutting	03
7	Introduction to NDT, Various types of NDT method like LPT, Magna flux, Radiography, Ultra Sonic Flaw Detection etc	04
8	Defects & remedies in welding	02
9	Robotic Welding, Welding Automation	02
10	ISO 3834, WPS Preparation and Welder Qualification	03
11	Review	02
	Total	36

SUBJECT NAME	C & W THEORY-01
SUBJECT CODE	MCT-01
MODULE	MSE-C, MJR-C, MJI-C

Sl. No.	Topic	Duration in Hours
1	Design, Repair & Maintenance of Shell: ICF, LHB, MEMU/EMU coaches and all variants like double decker, Tejas, Gatiman, Hamsafar, Dindyalu, Project Swarn & Project Utkrith, Train-sets etc.	18
2	Wheel & its defects, Wheel shelling in LHB coaches	06
3	Axles & bearings of all rolling stocks including MSU	06
4	Air Brake System: Components, BMBC, EP brake, WSP, Pipe joints, Testing of coach brake, Loco capability test, continuity test	32
5	Repair and maintenance of Passenger Amenities and Safety fittings	06
6	Bogie and Suspension system including Air Suspension: Failure & remedial features, Repair and Maintenance, FIBA	12
7	Couplings & Buffers, IRS, CBC, Schaku, Dellnor, BDG: Design, repair and maintenance	18
8	Train Examination -Coaches: Maintenance schedules, Revised RPC-IV, Issue of BPC, CMM, En-route trouble shooting	08
9	Infrastructure requirement for coach maintenance: Pit lay-out, Sick line lay-out, Rake link, M&P Pit occupation chart, automated coach washing plant, warranty claims of coaching items	18
10	IRCA Part IV, Modifications, TSOs, CAIs, Technical Pamphlets	06
11	Latest JPOs in Coaching Stock	02
12	Visit to major coaching depot	06
13	Review	06
	Total	144

Shri Manish Kumar (Ch – 11 to 14),

SUBJECT NAME	DIESEL LOCOMOTIVE THEORY (Common.) - 01
SUBJECT CODE	MDT-01
MODULE	MSE-D, MJR-D, MJI-D

Sl. No.	Topic	Duration in Hours
1	Lay out of Locomotives, Single/Dual Cab design, Types of I.C. Engines and working, classification	06
2	Traction Machine, Tractive effort-speed characteristics and coefficient of Adhesion (Alco & HHP)	06
3	Supercharging principles, methods and various testing parameters, Air and Computer control brake system (Alco & HHP)	06
4	Fuel system - components, function, defects and remedy, Fuel injection system (Alco & HHP)	06
5	Lube oil system - components, function, defects and remedy (Alco & HHP)	06
6	Cooling water system - components, function, defects and remedy, Radiator fan - principle, operation and maintenance (Alco & HHP)	06
7	Layout of shop and shed, Schedule of maintenance (Alco & HHP), Shed management, Record keeping, Outages, Super checking	06
8	Loco maintenance procedure; Bogies- types, load transfer, transmission of TE, suspension system; Cattle guard, gear case, wheel profile, specification & defect, coupling, bearing fitment etc. (Alco & HHP)	06
9	REMMLOT and Vigilance Control Device	06
10	GE locos- introduction, features, advantages etc	06
11	Various types of Transmission, feature of an Ideal transmission in Diesel Loco, AC-DC, AC-AC transmission	12
12	Various rotating equipment such as TA, TM, EG/CA, AG, DB Blower, Fuel booster pump motor - Description /Overhauling/Repair/Testing, common problems & remedy (Alco & HHP), ECC & CCEM in Alco	18
13	Excitation systems and Dynamic brake system (Alco & HHP), Transition system - circuit analysis, defects and remedy for Alco	12
14	Microprocessor based controls, APU, DEMU DPC, Distributed Power Control System (DPCS)	12
15	Types of governors, overhauling procedure, testing methods	12
16	Various safety & Misc items- Cab equipment, Driver seat, Wiper, Horn, Head light, Sanding equipment, Hand brake, Emergency switches and alarm fitted in Loco - working principles (Alco & HHP)	12
17	Testing of Engines - Dry-run-Test, Blow-bye test, Random test, Load Box testing, MU operation testing	06
Total		144

Shri. Naveen Jaiswal (Ch-1 to 6), Shri Anuj Yadav (Ch - 7 to 12),

Shri Arvind Maurya (Ch - 13 to 20),

SUBJECT NAME	WORKSHOP THEORY -01
SUBJECT CODE	MWT-01
MODULE	MSE-W, MJR-W

Sl. No	Topic	Duration in Hours
1	Organizational Set up of Railway from Board to Workshop	02
2	Function of each department in short	02
3	Layout of Workshop with important facilities for each shop function	06
4	Role of Workshop, diff shops & its functions in brief, Attendance monitoring: GA card punching/Digital/Bio metric	12
5	Reporting in Workshops- Targets, Planning, Statistics, Workshop Portal, 100 days failure statistics	02
6	Role of Supervisors in Workshop & their responsibilities	03
7	Material Handling Methods & Equipment	06
8	Machinery & Plant Maintenance	12
9	Jigs, Fixtures & Gauges	12
10	Quality Management System (QMS) & TQM	12
11	ISO & EMS System in Workshop. Introduction to ISO 9001, ISO 14001 & ISO 50001, IMS 14001 & OHSAS 18001, Green-Co Rating, ISO 3834, 5S, Lean six Sigma	06
12	Value Engineering, types of needs and demands	03
13	Production Planning and scheduling	06
14	Process inventory control	06
15	Industrial Safety Requirement & Procedure	06
16	Drawing usage, preparation, Modification & its record maintenance	03
17	Workshop Specific Labour laws, HOER, Workman Compensation Act	02
18	Pollution and its Control Measures in Workshops, Solid Waste Management, Effluent Treatment	03
19	Industry 4.0, CNC Machines	02
20	Revision	02
	Total	108

Examination Pattern

C&W				Diesel				Workshop			
Paper	Subject	Marks	Total	Paper	Subjects	Marks	Total	Paper	Subject	Marks	Total
I	MRT-07	25	75	I	MRT-07	25	75	I	MRT-07	25	75
	MRT-09	25			MRT-09	25			MRT-09	25	
	MRT-10	25			MRT-10	25			MRT-10	25	
II	MCT-01	100	100	II	MDT-01	100	100	II	MWT-01	100	100