

Time Table
Session – IJE 2nd Session

Batch – IJE/25-26/01
Session Date – 05.01.2026 to 14.03.2026
Examination dates* – 09.03.2026 to 14.03.2026
 (*Subject to change)

Course Coordinators -Sh. Anurag Singh

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	ANS	ADS		RCS	AK		AY		AM
Tuesday	AY	NCJ	Tea Break	ADS	ANS	Lunch	RCS	Tea Break	ALS
Wednesday	MK	AM	11:40	AH	ALS	13:30	AY	15:45 to	Lab/Library
Thursday	ANS	RCS	to 11:55	AK	MK	to	AM	16:00	AH
Friday	AK	AY		NCJ	AM	14:30	ALS		श्रमदान/योग
Saturday	AH	NCJ		ADS	MK				

(N.C.Jaiswal)
Sr.Lecturer & Course Director/STC/CB

ABSTRACT OF MODULES

SL. NO.	Name of Post	Stream	Module No.	Duration in Weeks	Page No
1	Sr. Section Engineer	C&W	MSE-C	52	3 - 4
2	Sr. Section Engineer	Diesel	MSE-D	52	5 - 6
3	Sr. Section Engineer	Workshop	MSE-W	52	7 - 8
4	Junior Engineer (RRB)	C&W	MJR-C	52	9 - 10
5	Junior Engineer (RRB)	Diesel	MJR-D	52	11 - 12
6	Junior Engineer (RRB)	Workshop	MJR-W	52	13 - 14
7	Junior Engineer	C&W	MJI-C	52	15 - 16
8	Junior Engineer	Diesel	MJI-D	52	17 - 18
9	Junior Engineer	Workshop	MJ1-W	52	19 - 20
10	Junior Engineer	C&W	MJP-C	13	21
11	Junior Engineer	Diesel	MJP-D	13	22
12	Junior Engineer	Workshop	MJP-W	13	23

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

MODULE - MJI D

Name of the Post/Category	Junior Engineer
Stream	Diesel
Mode of appointment	Promotion through LDCE
Min. Qualification	XII Std/ ITI
Total Duration of Training Period	52 Weeks

Session	Type	Subjects	Subject code	Duration in weeks	Activity Centre
I	THEO	Railway Organization & Management	MRT-01	03	STC
		Role of Mechanical Dept.	MRT-02	01	
		Applied Mechanics	MET-01	09	
		Hydraulics	MET-02		
		Manufacturing Processes	MET-03		
		Engineering Drawing	MET-04		
		Electrical Engineering	MET-05		
		Theory of Machines	MET-08		
II	THEO	Strength of Materials	MET-06	07	STC
		Heat Engines & Thermodynamics, Refrigeration and Air-conditioning	MET-07		
		Material science	MET-09		
		Machine Design & Drawing	MET-10		
		Industrial Engineering	MET-11	01	IRIDM
		Accident & Disaster Management	MRT-08		
		Train operations with signaling	MRT-11		
		Introduction to Rolling stock (Coach, Wagon, Diesel Loco, DEMU, SPART)	MRT-13	03	STC

Session	Type	Subjects	Subject	Duration in weeks	Activity Centre	
III	THEO	Industrial Safety, First aid & Firefighting	MRT-06	01	STC	
		Tender & Contract	MRT-07	01		
		Managerial Skills	MRT-09	02	STC	
		Computer Awareness	MRT-14	01		
		Technical English	MRT-15	01		
	Stream specific theory	MDT-01	04	Respective Unit		
	PRACT	Field Visit	Diesel Workshop POH			01
			Divisional control office			01
		Diesel Loco PU Training		01	DLW/DMW/ DLF (MEW) & RDSO	
IV	THEO	Stream specific theory	MDT-03 M/E	04	STC/DTTC	
		Stream specific theory	MDT-04 M/E	04	STC/DTTC	
	PRACT	Diesel Shed		01	Parent Unit	
		Practical Training in Welding specific		01		
		On Job Training		02		
			Refreshing /Examination/Viva		01	STC
TOTAL				52		

Subject & Faculty

ANS S.No. 1 to 5

AM S.No. 6 to 9

SUBJECT NAME	STRENGTH OF MATERIALS	
SUBJECT CODE	MET-06	
MODULE	MJI	
SL NO.	TOPIC	TIME IN HRS
1	Introduction about materials & its properties	02
2	Simple stress and strain	12
3	Elastic constants	06
4	Centre of gravity	03
5	Moment of inertia	07
6	Shear force & bending Moment of beams	20
7	Stresses in beams	08
8	Torsion of shafts	08
9	Review	06
	Total	72

Subject & Faculty

AY S.No. 1 to 9

AK S.No 10 to 16

SL NO.	TOPIC	TIME IN HRS
1	Introduction	02
2	Properties of Gases, Laws of Thermodynamics	06
3	Thermodynamic process of perfect gases	04
4	Heat and mass transfer	06
5	Steam	03
6	Air cycles	03
7	Internal combustion engines	06
8	IC Engine Systems	04
9	Testing of IC Engine	02
10	Compressors	04
11	Refrigerants	04
12	Refrigeration Cycles	06
13	Properties of moist air	06
14	Psychrometry of Air-Conditioning Process, Load calculation	08
15	Application of Air-conditioning in Railways	04
16	Reviews.	04
	Total	72

Subject & Faculty

MK

SUBJECT NAME	MATERIAL SCIENCE
SUBJECT CODE	MET-09
MODULE	MJI

SL NO.	TOPIC	TIME IN HRS
1	Introduction	02
2	Solid phases, phase diagrams and phase transformation, Iron carbon equilibrium diagram	03
3	Heat treatment	06
4	Types of alloy steels	02
5	Non-ferrous metals	02
6	Paint, Enamel, Varnishes and lacquers	02
7	Classification of railway materials	02
8	Plastic and synthetic materials	02
9	Review	03
	Total	24

Subject & Faculty

ADS S.No 1 to 8

NCJ S.No 9 to 17

SL NO.	TOPIC	TIME IN HRS
1	Introduction about Design principle	02
2	Design of keys	02
3	Design & Drawing of screw thread	04
4	Design of coupling	04
5	Design of welded joints	03
6	Design & Drawing of cotter & knuckle joints	04
7	Design & Drawing of Riveted joint	04
8	Design & Drawing of CAM profile	04
9	Design of Coil springs	03
10	Design of Laminated springs	02
11	Limits, Fits & Tolerance	04
12	Orthographic & Isometric Drawing of machine components	02
13	Assembly Drg of Foot Step Bearing	02
14	Assembly Drg of Plummer Block	02
15	Assembly Drg of Screw Jack	02
16	Assembly Drg of Tail Stock	02
17	Review	02
	Total	48

Subject & Faculty

RCS

SUBJECT NAME	INDUSTRIAL ENGINEERING
SUBJECT CODE	MET-11
MODULE	MJI

SL NO.	TOPIC	TIME IN HRS
1	Introduction	02
2	Method Study	04
3	Principle of Motion Economy	02
4	Plant Layout	02
5	Work Measurement	06
6	Network Techniques	06
7	Exercise on Network	02
8	Incentive Schemes in Railway Workshops	06
9	Job Evaluation and Merit Rating	03
10	Review	03
	Total	36

Subject & Faculty

ALS S.No 1-8, AH S.No 9-12
RCS S.No 13-14, ANS S.No 15-16
ADS S.No 17-18 AY S.No 19-21

SUBJECT NAME	INTRODUCTION TO ROLLING STOCK
SUBJECT CODE	MRT-13
MODULE	MJI

SL NO.	TOPIC	TIME IN HRS
1	Types of Coach and their nomenclature, Codal life, Transportation Codes, Coach numbering system	03
2	Introduction of Coach Shell: ICF and LHB Coach	02
3	Wheel set- wheel, axle & bearings	04
4	Introduction of Different types of Bogie for Rolling Stock and Suspension system including Air Suspension	06
5	Types of Draw and Buffing Gears in Coaches and Wagons: An Introduction	06
6	Air & EP Brake system; Brake riggings	09
7	Furnishing items: ICF and LHB, EMU/MEMU coaches, Safety & amenity fittings	04
8	Maintenance practice in coaching stock	03
9	Types of wagon stock, their nomenclature, Codal life, Transportation Codes, Wagon Numbering System	03
10	Types of bogies in wagon stock	03
11	Features of special wagons/latest wagons	03
12	Pattern of freight train examination	03
13	Diesel locomotives - types, Introduction of Electric Loco, EMU/MEMU & Train-Sets	03
14	Important systems in a diesel locomotive: Fuel oil, lube oil, cooling water, turbo supercharging & brake system	15
15	Electrical control system in Locomotives and Train-Sets/EMU/MEMU	06
16	Latest development in Rolling Stock including Locomotives and Train-Sets	06
17	DEMU: Power and Trailing cars, important features and systems	05
18	SPART- Introduction, Basic arrangements, importance.	01
19	Weighbridge, WILD and other way side monitoring systems: Overview	03
20	Visit to model room/coaching/wagon depot/workshop & loco shed	14
21	Review	06
	Total	108

-----XXX-----XX-----XX-----XX-----XX-----XX-----