

9/10

(138)

SYLLABUS FOR TRAINING APP. JE-II(D) (ELECTRICAL)
IN GRADE Rs.5000-8000

		Training to be imparted at	
1. <u>Drawings:</u>	Basic Engineering Drawings	} 1 Week } CEE's Office ✓ } 2 weeks } } 2 Weeks }	
	Introduction to Machine Drawings		
	Electrical Drawings		
	Layouts of Factories Building and Yard Lighting System.	} 2 Weeks } CRS/TPTY	
	Standard Drawing for OHE Layout :	1 Week } Sr.DEE/TRD BZA	
	<u>Total- 26 Weeks.</u>	Structural Erection Drawings : 2 Weeks	
		Traction Sub-Stations-Switching Stations: 2 Weeks	
		Standards of RDSO for R.C. System: 1 Week	
		Loco Component Drawings : 4 Weeks	Sr.DEE/TRS BZA.
		Power Supply arrangements. : 2 Weeks	
	Power Line Crossings the Track : 1 Week		
	Knowledge on Track System : 1 Week	Sr.DEE(M)/BZA	
	Knowledge on Colour Light Signals. : 1 Week		
	System Drawings on T.L. & Coach: 4 Weeks	DY.CEE/S/LGD. ✓	
	Air-condition.		
2. <u>Specifications.</u>	2.1 (i) Indian/British Standard Specification for Electrical, Electro-mechanical equipments including Wiring Materials like Cables & Conductors, Transformer, Switch Gears, Motors, Pumps, Rectifiers, Diesel Engines, Paints, Varnish, Mica & Other insulating materials etc. Batteries, Train Lighting Dynamos - Brushless alternators, Measuring instruments etc.	CEE office. ✓	
	2.2 (ii) Departmental Specification for purchased items including all the Specification issued by RDSO from time to time for Electrical Machinery and Equipments including equipments on Traction Installations.	CEE/TRSQ/Office. ✓	
	2.3 Works Specification: Departmental Specification for Contract Works including method of execution, inspection procedures and Contract Schedules.	CEE's office ✓	
4 Weeks.			
4 Weeks.			
2 Weeks			
3. <u>Codes & Manuals.</u>	3.1 (i) Technical - I.S. Code of practice for installation and maintenance for Electrical Equipment & Machinery including Transformers, Pumps, Motors etc.	CEE Office. ✓	
	I.E. Rules & application, regulation for safe Working Power Line Crossing track.	✓	
2 Weeks			

Training to be
imparted at

<u>3 Weeks</u>	3.2 Other - Way and Works Manual Chapter relevant to Elec. Branch, Engg. Code, Stores Code, Schedule of Powers, General Code, Accounts Code.	Sr. DEE/ ra/HYB)
	Rules for allocations System of Audit Tariff of Electricity Boards - Latest rules - applications etc. - Pooled rate of Tariff, its working out etc.	
<u>4 Weeks</u>	4. <u>Estimates.</u> Basic Principles - Element of Work Measurements. Material Assessment. Types of Estimate - Allocation Processing of Estimate including those required for deposit works and for those works carried out for outsiders.	Pug (DEE/EN/SC)
<u>5 Weeks.</u>	5. <u>Programmes Plan & Budget Reviews:</u> Works Programme M&P Programme RS Programme Corporate Plans Budget Reviews & Control on Expenditure.	: 1 Week : 1 Week : 1 Week : 1 Week : 1 Week CEE's Office
<u>2 Weeks.</u>	6. <u>Tenders & Contracts:</u> Stores Tenders Preparation of Indents Issue of P&C. Scrutiny of Tenders Inspection of Stores Brief Idea Reg. Inventory Control	(Sr. DEE/BG/SC)
<u>2 weeks</u>	<u>Works Tenders: Tender Notice:</u> Preparation of Tender Documents. Scrutiny of Tenders. Tender Committee Rules. Awarding & Finalising Procedure. Contract documents.	Pug (DEE/EN/SC.)
<u>16 Weeks</u>	7. <u>Designs:</u> Lighting System : AEE/CRS/TPTY : 2 Weeks Pumping System : : 2 Weeks Power Supply Movement : : 2 Weeks O&E for Elec. Tr. : Principal ETC/BZA : 4 Weeks Tr. Substations. : Building Air-conditioning (CEE's Office) : 2 Weeks.	
<u>4 Weeks</u>	8. <u>Train Lighting & Coach Air Conditioning.</u> Batteries, Introduction to Various Systems. Coach Wiring. Brushless Alternators Control Equipments. Air-Conditioned Coaches.	DN. CEE/S/ LGD.

:3:

9. Traction Rolling Stock:

4 weeks.

- General Instructions
- Types & Specialised applications.
- Electrical system
- Pneumatic system
- Operational condition
- Performance characteristics

Sr. DEE/TRS/
O/BZA.

10. Traction Distribution:

4 weeks

- Principles of Electric Traction
- OHE Distribution
- Principles of Controls & Safety equipments.

Sr. DEE/TRD/
BZA.

11. Electrical Testing System:

2 weeks

- General Instructions
- Test Procedures
- Test Codes
- Identify quality products
- Testing of minor eqpts. after repair/servicing.

Dy. CRE/S/
LGD.

12. Field Training/Demonstration:

4 weeks.

- Train Lighting:
- Battery Section
- Dynamics
- Fans & lights
- Alternators
- Other accessories
- BOG & MOC

Dy DEE/S/LGD

13. Final Training - Demonstration:

2 weeks

Traction:

2 weeks

OHE Layouts

2 weeks

Traction sub-stations

6 weeks

SEDS

Sr. DEE/
TRD/BZA.

2 weeks

General

2 weeks

Pumping Section

2 weeks

Yard lighting section

6 weeks

Air-conditioning

Sr. DEE/TE/
SC.

14. Review and Tests: 4 weeks

15. NOTE: 10% of the total marks on the Question Paper shall be allotted to official language and Policy (Authority! Railway Board & Ls NO E(NG)J-94 LPT/16. dt 16/11/94 (S.C. NO 107/94).

TOTAL WEEKS: 104