

"PVC" NSSK Govt. Polytechnic Bilaspur at Kalol (H.P.)
Lesson Plan (Theory)

Branch : Mechanical Engg.

Semester: 6th

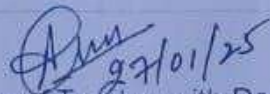
Subject : Electric Traction.


Session: Jan. 2025 – Jun 2025

Teacher : Ashwani Kumar

Class Room: L-6

Sr. No.	No. of Lectures	Chapter/ Unit Description	Detail of Contents	Reference Resources	Rem.
1	9	Basics of Traction	General description of Electrical Traction system in India. Advantages and Disadvantages of Electric Drive, Diesel Electric Drive, Battery Drive Problems associated with AC traction System and remedies for it.	R1,R2,R3	
2	9	Power Supply Arrangements	Constituents of supply system - Substation: layout, list of equipment and their functions Feeding post: list of equipment and their functions Brief introduction to - Feeding and sectioning Arrangements, Sectioning and paralleling post, Sub sectioning and Paralleling post, Sub sectioning post, Elementary section.	-do-	
3	11	Overhead Equipment	Different types of overhead equipments Different types of OHE Centenary Construction OHE Supporting Structure, Cantilever assembly diagram Brief introduction to - Trolley collector, Bow collector, Pantograph Collector Brief introduction to pantograph.	-do-	
4	11	Electric Locomotive	Classification and Nomenclature of Electric Locomotive Block diagram of AC locomotive Power Circuit of AC Locomotive	-do-	
5	8	Traction Motors and Train Lighting	Desirable characteristics of traction motor. Types of motors used for traction with their characteristics and features Control of motors used for traction and methods to control, Requirements of braking, brief introduction to different types of braking		


Signature of Teacher with Date


Signature of HOD (EE)

Teaching Resources:

- R1. G.C. Garg, Utilization of Electric Power & Electric Traction, Khanna Book Publishing Co., New Delhi.
- R2. Gupta J.B., S.K.Kataria and Son, Utilization of Electric power and traction
- R3. Partab H., Dhanpat Rai and Co, Modern Electric Traction