

2: ELECTRICAL TECHNOLOGY (FA, FB, FC)

Std. XII

Paper	Title of the Paper	Theory		Practical		Term work	Project work	I.V.*	OJT**	Total Marks
		Marks	Time (Hrs)	Marks	Time (Hrs)					
3	Electrical Machines	80	3	80	3	10	10	10	10	200

* IV = Industrial Visits

** OJT = On Job Training

Paper III: Electrical Machines (FC)

Objectives

To enable the students to

1. Understand the student about three phase transformer construction and working principle.
2. Know the construction working principle and various types' three phase AC motors.
3. Students should rewinding the three phase motors.
4. Know about electrical pumps maintenance and repairs.
5. Know about different starters and relay settings.

Theory

Sr. No.	Unit	Sub-Unit	No. of Periods
1.	Three phase Transformer	Introduction	20
		Working Principle construction of Transformer, connections of transformer, distribution and power transformer , Transformer testing and maintenance	
2.	3phase AC MOTOR	Types of motor construction	22
		Working principle of poly phase motor (asynchronous motor)	
		Speed control of three phase motors	
		Testing and repairing	
		Installation and commissioning	
3.	Three phase AC motor winding	Fundamental winding terms	30
		Types of winding	
		Introduction of modern winding machine	
		Rewinding procedure of AC machines	
		Different types of winding data and its developed diagrams	
4.	Control circuits	Basic Controllers	16
		Some important definitions	

5.	Electric Pump	Working Principle	16
		Types of pumps	
		Maintenance & repairing of pumps	
6.	Motor starters and Relay setting	necessity of starter	16
		Procedure of relay setting in starter	
		Types of AC motor starter-Construction, working principle and uses of AC motor Starters 1) DOL starter 2) Fully automatic star-dela starter 3) Auto transformer starter 4) Rotor Resistance starter 5 Mobile remote control starter their ckt (connection) diagram.	
Total			120