

Module Name (Electrical Engineering)	Total Hours
Control Panel Wiring	50

Sr.	Topic name	Contents	Hours
1	Basics of electrical Engg.	1.1 Electrical terminology 1.2 Units of electrical measurement 1.3 Electrical symbols 1.4 Electrical safety	4
2	Panel designing	2.1 Basics of relays, contactor, MCB, MCCB, ELCB, ACB, VCB etc... 2.2 Designing of control circuits using contactors, relays, timers etc 2.3 Different types starters : DOL & star delta starter for 3 phase motors with specification. 2.4 Practical wiring session on different controls. 2.5 Safety and management concepts of designing a project.	26
3	Control panel wiring	3.1 Different types of panels. 3.2 Basic components to be installed in a panel. 3.3 Wiring details of panel. 3.4 Specification and physical dimension of components. 3.5 Earthing and cabling of panels- standard procedures. 3.6 P&i diagram preparation.	14
4	Sensor interfacing	4.1 Types of sensor 4.2 Specification of various sensor 4.3 Real time application of sensor 4.4 Interfacing of sensor by various components.	06
		Total	50