

2: ELECTRICAL TECHNOLOGY (FA, FB, FC)

Scheme of Examination

Std. XII

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

* IV = Industrial Visits ** OJT = On Job Training

Paper I: Electrical Wiring (FA)

Objectives

To enable the students to

- 1) Acquire knowledge and skills about safety precautions while working.
- 2) Identify and to use different tools used in wiring.
- 3) All units with properties and usage of different materials.
(Conducting ,Insulating, Magnetic, In structural, Wiring etc)
- 4) Understand the general concept of Generation of electrical power.
- 5) Understand the general concept of different wires.
- 6) Know about electrical symbols used in electrical parts.
- 7) Know about electrical house wiring.

Practical

Sr. No.	List of Practical's	Periods
1.	Safety measures to be observed followed in the electrical workshop	4
2.	Demonstration of elementary first aid	12
3.	Personal protection basic injury prevention basic first aid safety signs for danger, warning & caution	8
4.	Artificial respiration techniques of separating person in contact with & live wire	8
5.	Demonstration of use of fire extinguishers	8
6.	Demonstration of trade hand tools	6
7.	Use of crimping tools	8
8.	Measurement of current voltage of power of a appliances	8
9.	Calculate the bill of electricity for one month domestic use	8
10.	Verification of Ohm's Law	8
11.	Measurements of power of a appliance / circuit	8
12.	Calculation of unknown resistance V.I Method & Multimeter method	8
13.	Connecting of lamp in series	4

14.	Connecting of lamps in parallel circuits study of Resistance inductance	8
15.	Practical on P.F improvement of power factor	4
16.	Demonstration and identification of different types of wires & cables	8
17.	Demonstration and practice of using standard wire gauge	4
18.	Demonstration of cable joining kit	4
19.	Skinning the cable and joint practice on single and multistrand wire (straight married and pigtail joint)	8
20.	Market survey of electrical accessories	8
21.	Identification and use of wiring accessories	8
22.	Practice one installation of common electrical accessories such as switch, holder, plug on board	8
23.	Two lamps controlled by two independent single pole switch	12
24.	Practice of conduit and concealed on stair case wiring	
25.	Installation and wiring connection of ceiling fan exhaust fan, geyser, water purifier	12
26.	Measurement of insulation resistance of new house wiring by using megger	12
27.	Practice of pipe & plate earthing	12
28.	Practical on electrical tube connection & testing fault & repair	8
29.	Industrial visit	12
	Total	240