

ENGINEERING AND TECHNOLOGY GROUP

ELECTRONICS TECHNOLOGY

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	Applied and Industrial Electronics	80	3	80	3	10	10	10	10	200

* IV = Industrial Visits

** OJT = On Job Training

Introduction

Electronics Technology is one of the important Higher Secondary vocational course under Engineering and Technological group introduced by the state government from the academic year 1988-1989. The state board revised syllabus as per NSQF (National Skills Qualification Framework). This policy is decided by National Skill Development Corporation (NSDC) under HRD ministry of Government of India to nurture technological advancement & Skill development for job opportunities in various Electronic sectors.

The syllabus of Electronics Technology sector has been evolved in such a way that after completion of the course of two years (Std. XI) [L3] and (Std. XII) [L4] The student would acquire good working skills suited to work as a skilled person in industry. He would also gain knowledge for electronic technician, electronics sales & service.

Objectives

On completion of the course, the student will gain.

- Knowledge of working & operating principles of electronic circuits & equipments.
- Skills for fault analysis and diagnosis of electronic equipment, repair & replacement of faulty parts.
- Skills on assembly, testing, repair, maintenance and installation of electronic equipment.
- Ability to examine schematic layouts wiring diagrams and product details.
- Knowledge of entrepreneurship activities.
- Awareness of safety precautions.

Job Opportunities

After successful completion the course the student can have opportunities in the following fields with acquiring professional skills.

- Audio & TV technician.
- Computer hardware technician.
- Electronics servicing sector.
- Electronic technician.
- Sales & service in consumer electronics.
- Service person in telecom sector.
- Entrepreneur.

Future Education

If student desires he can take admission to direct second year diploma course and also go for higher education.

Std. XII
Paper I: Applied and Industrial Electronics
Theory

Sr. No.	Unit	Sub-unit	Periods
1.	Operational Amplifier	1.1 Need of OPAMP	30
		1.2 Block diagram OPAMP	
		1.3 Ideal Characteristics	
		1.4 OPAMP Parameter	
		1.5 Linear Applications	
		1.6 Non Linear Applications	
2.	Electronic Timers	2.1 Introduction to IC-555	28
		2.2. Astable multi vibrator	
		2.3 Monostable multi vibrator	
		2.4 Bistable multivibrator	
		2.5 FSK Using 555	
		2.6 Introduction to PWM.PPM,PAM application	
3.	Optoelectronic Devices	3.1 Photo diode	15
		3.2 Photo transistor	
		3.3 LDR	
		3.4 FOC	
4.	Motors	4.1 Motor fundamentals	11
		4.2 Speed control of Motor	
		4.3 Applications	
5.	Modern Electronic Machine	5.1 Copier (Xerox)	14
		5.2 Scanner	
		5.3 Lamination machine	
		5.4 I-card making	
		5.5 Emergency Light	
		5.6 FAX	
6.	Remote Control	6.1 Introduction.	10
		6.2 Ground Station	
		6.3 Remote Station	
		6.4 Applications	
7.	Solar Systems	7.1 Solar Cell	12
		7.2 Applications	
		7.3 Maintenance	
		7.4 Introduction to Solar Power station	
Total			120