C.U.SHAH UNIVERSITY

FACULTY OF: - Technology & Engineering
DEPARTMENT OF: -Instrumentation & Control Engineering
SEMESTER: - V
CODE: - 4TE05ECD1
NAME – Electronic Circuit Design

Teaching & Evaluation Scheme

Subject Code	Subject Name	Teaching Hours/Week				Credits	Evaluation Scheme/Semester							
							Theory				Practical			
							Sessional Exam		University Exam		Internal		University	Total Marks
		Th	Tu	Pr	Total		Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
4TE05ECD1	Electronic Circuit Design	1	0	2	2	2	--	--	--	--	--	50	50	**100**

Objectives

- To introduce the students to circuit designing concepts and methods.

Pre-requisite

- Fundamentals of electronics and electrical engineering.

Course Outlines

Sr. No.	Course Contents	No. of Hours (Lab+Lec)
1.	D.C. power supply along with series regulated for 15V, 1 Amp.	3
2.	D.C. regulator using IC.	3
3.	SMPS using PWM techniques.	3
4.	Voltage amplifier as per specifications.	3
5.	Power amplifier as per specifications.	3
6.	Window comparator.	3
7.	Wave form generators using IC (e.g. sine wave, Square wave, ramp wave etc.)	3
8.	Instrumentation amplifier.	3
9.	Temperature controller.	3
10.	Revolution counter.	3
11.	A. C. Power controller using Thyristors.	3
12.	Solid state over voltage / over current protection.	3
13.	Alarm annunciator.	3
14.	D to A and A to D converter.	3
15.	DC motor control (Speed & Direction Control)	3

Learning Outcomes

- The students would be able to design, fabricate and test the given electronic circuits.

Books Recommended

1. Microelectronics by Sedra & Smith, Oxford University Press
2. TTL & CMOS Data Books (Reference Book)
3. Linear IC Data Books (Reference Book)
4. Semiconductor Data Books(Reference Book)