

LESSON PLAN

FUNDAMENTALS OF ELECTRONICS ENGINEERING

Course Code- TH 4(a)

NAME: NIHARIKA SETHY , **LECT:** ETC, **W.E.F:** 09.01.2026 TO 08.05.2026
SUB: FUNDAMENTALS OF ELECTRICAL & ELECTRONICS ENGG.
SEM: 2ND, **BRANCH:** MECH ENGG , CIVIL ENGG , PME ENGG

NO OF PERIODS/WEE:2	TOPICS TO BE COVERED	REMARK
WEEK-1	UNIT I: Overview of Electronic Components & Signals: 1. Passive Active Components: Resistances, Capacitors, Inductors, 2. Concept and simple problems of Resistance, Capacitor & Inductor	
WEEK-2	3. Diodes, Definition, classification and Working of diode (PN junction, LED, Zener) 4. Transistors,	
WEEK-3	5. FET, 6. Types of FET,	
WEEK-4	7. MOS and CMOS 8. MOS and CMOS Applications	
WEEK-5	9. Signals: DC/AC, voltage/current, 10. periodic/non-periodic signals.	
WEEK-6	11. Average, 12. rms, peak values,	
WEEK-7	13. Different types of signal waveforms. 14. Ideal/non-ideal voltage/current sources. Independent / dependent voltage current sources. (Definitions)	
WEEK-8	UNIT II Overview of Analog Circuits: 15. Operational Amplifiers-Ideal Op-Amp, 16. Practical op amp, Open loop and closed loop configurations	
WEEK-9	17. Application of Op-Amp as amplifier. 18. Adder, Subtractor, Differentiator and Integrator.	
WEEK-10	UNIT III Overview of Digital Electronics: 19. Introduction to Boolean Algebra. 20. Boolean Algebra.	
WEEK-11	21. Electronics Implementation of Boolean Operations. 22. Gates-Functional Block & Approach.	
WEEK-12	23. (Simple problems of Number system) 24. . (Simple problems of Number system)	
WEEK-13	25. Storage elements-Flip Flops- 26. Flip Flops.	
WEEK-14	27. A Functional block approach, Counters: 28. Ripple, Up / down and decade.	
WEEK-15	29. Introduction to digital IC Gates (of TTL Type). 30. . Introduction to digital IC Gates (of TTL Type).	