C.V. RAMAN POLYTECHNIC, BBSR

LESSON PLAN

Session (2026-2027)

Discipline: Diploma Branch: ETC	**Semester: 3rd**	**Name of the Teaching Faculty: Sabyasachi Patra Email ID: sabyasachi.patra@cvrp.edu.in**
Subject: Electronics-Devices (ETCPC 203)	**No. of Days/per week class allotted:** 45days/ 3 class per week	**Semester From Date:** 01/07/2026 **To Date:**05/11/2026 **No. of Weeks:**15
Week	**Class Day**	**Theory**
1st	1st	1.1 Review of Quantum Mechanics
	2nd	1.2 Electrons in Periodic Lattices
	3rd	1.3 Energy Bands in Intrinsic & Extrinsic Si
2nd	1st	1.4.1 Diffusion Current
	2nd	1.4.2 Drift Current
	3rd	1.4.3 Mobility and Resistivity
3rd	1st	2.1 Generation and Recombination
	2nd	2.2 Poisson and Continuity Equations
	3rd	2.3.1 Construction of P-N Junction Diode
4th	1st	2.3.2 Operating Principle
	2nd	2.3.3 P-N Junction Characteristics
	3rd	2.3.4 I-V Characteristics
5th	1st	2.3.5 Small Signal Switching Models
	2nd	2.3.6 Avalanche Breakdown

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	3rd	2.3.7 Zener Diode
6th	1st	2.3.8 Schottky Diode
	2nd	2.3.9 LED
	3rd	2.3.10 Photodiode and Solar Cell
7th	1st	3.1 Construction of BJT
	2nd	3.2 Operating Principle of BJT, 3.3 Types of BJT
	3rd	Class Test-1
8th	1st	3.4 Working of p-n-p & n-p-n BJT
	2nd	3.5 I-V Characteristics
	3rd	3.6 Ebers Moll Model
9th	1st	3.7 CB, CE, CC Configurations
	2nd	3.8 Input & Output Characteristics
	3rd	3.9 Alpha, Beta, Gamma Definitions
10th	1st	3.10 Mathematical Relationship
	2nd	3.11, 3.12 Biasing and Types
	3rd	3.13 h-Parameter Model
11th	1st	3.14 Load Line, Q-Point
	2nd	3.15 Types of Coupling
	3rd	3.16 R-C Coupled Amplifier
12th	1st	3.17 Frequency Response
	2nd	4.1, 4.2 FET Intro & BJT vs JFET
	3rd	4.3 JFET Construction & Operation
13th	1st	4.4 JFET Parameters
	2nd	4.5 JFET as Amplifier, MOSFET Intro
	3rd	4.6 MOSFET Classification, 4.7 MOSFET Characteristics

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14th	1st	Class Test-2
	2nd	4.8 CMOS, VMOS, LDMOS
	3rd	5.1 Define & Classify Feedback Amplifier, 5.2 Feedback Amplifier & Types, 5.3 Characteristics of Amplifiers, 5.4 Oscillators & Barkhausen Criterion
15th	1st	5.5.1 to 5.5.3 LC oscillator, Colpitts, Hartley, Wien bridge oscillator. 6.1 Oxidation, 6.2 Diffusion
	2nd	6.3 Ion implantation. 6.4 Photo-lithography 6.5 Etching
	3rd	6.6 Chemical vapor deposition 6.7 Sputtering 6.8 Twin-tub CMOS process

Signature of Faculty

Signature of HOD (ETC)

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