EET 131 Unit 1 Reading – Diodes

Rev2

Sec #	Topic and Pg to Read	# of Pg
1-5	(Optional)N & P Type Semiconductors and read Sec Review at End	
1-6	**Diode Construction** and the **Depletion Region Formation** Pg 17 ¾ bottom thru 19 top ½ and read Sec Review at End	2 ¼
1-7	**Forward Biasing** of the **Diode** Pg 20 bottom ½ thru 22 top ¾	
1-7	**Reverse Biasing** of the **Diode** Pg 22 bottom ¼ thru 24 top ½ and read Sec Review at End	1 ¾
3-3	**Varactor Diodes** and Pg 125, 126 top ½ and read Sec Review at End Diode Junction Capacity Optional Pg 126 bot ½, 127	1 ½
3-1	**Zener diodes** Pg 110 thru 112 top ½	2 ½
	Zener Power Dissipation calc. Pg 115 top par & Eq.	1/8
	Zener diode data sheet Pg 115 bot ½ thru 117 top 1/8 3-1 Sec review Pg 117 # 1,2,3	1 ½
3-2	**Zener Diode Voltage Regulation** Pg 117 bot 1/3, 118 top 2/3 Pg 120 bot 2/3, (Skip Ex: 3-6) **Zener Diode Calculations** Pg 122 **Ex 3-7** bot ¼ (b) (Optional) Pg 118 bot ¼ "To illustrate…", 119 top ¼ ; Pg 120 **Ex 3-6** bot 1/8 , 121 **Note: Zener $I_{ZK} = I_{Zknee} = I_{Zmin}$ (All 3 are the Same)** 3-2 Sec review Pg 124 bottom	1 ¾
3-6	**Troubleshooting Zener Reg**. Pg 144 bot ¼ thru 146 top ½ (Try Multisim troubleshooting exercises on your Text EWB CD)	1 ¾
	Ch 3 summary Pg 152 top thru "Cap of a Varactor" & Symbols below	¼

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(Continued)

Sec #	Topic and	Pg to Read	# of Pg
1-8	**IV Characteristics of a Diode**	and Read Sec Review at End	3 ¾
1-9	**Diode models**	Pg 28 bottom ½ thru 31 and Read Sec Review at End	3 ½
1-10	**Testing the diode**		2
	Ch 1 Summary	Pg 36 bot ½, 37	1 ½
2-1	**The Half Wave Rectifier Intro**. **Effect of diode V_{drop} on V_{out}** (skip sec review)	Pg 50 bot ¼ & Pg 51 bot ½ Pg 52 bot ¼ thru 53 Including **Ex 2-2**	¾ 1 ¼
3-4	**LEDs** theory LED Biasing & Emission	Pg 130 bottom ¼ ,131 top 1/3 Pg 131 bottom 1/3, 132 all	3
3-4	The **Laser Diode**	Pg 143 bottom ½ , 144 top ½	1
3-4	**System Application** Pg 147 Read **Counting & Control System** & Diagrams at Bottom Pg 148 Fig 3-53. Note: LED is Forward Biased, R for LED ≈ 220Ω Photodiode is Reverse biased., R for Photodiode ≈ 220K to 1MΩ Pg 151 Refer to Board 3 – When Beam is Not Blocked Scope reads ≈ 7.5V, When Beam is Blocked Scope reads ≈ 11V		1
11-12	**Fiber Optic Data Communications**	Pg 565 bottom ½ ,568 top ¼	¾
		Total # of pages =	**20 ½**