JEE2330 – Spring 2025
Lab #1 Values and Notes

Experimental Procedures:

Section 1.5.1 – Use and Limitations of DC Voltmeters (Figure 1.8 on Page 1-16)

Part a: V_{S1} = 16 volts R_{1a} = 33 kΩ R_{2a} = 47 kΩ

Part b: V_{S1} = 16 volts R_{1b} = 3.3 MΩ R_{2b} = 4.7 MΩ

Section 1.5.2 – Current Measurement via Series Resistance or DC Ammeter (Figure 1.9 on Page 1-16)

Part a: I_S = 5 mA R_{3a} = 2.7 kΩ R_{4a} = 2.2 kΩ

Part b: I_S = 5 mA R_{3b} = 100 Ω R_{4b} = 120 Ω

Section 1.5.3 – Measurement of Current in a Current Divider Circuit (Figure 1.10 on Page 1-17

Part a: I_S = 5 mA R_{3a} = 2.7 kΩ R_{4a} = 2.2 kΩ R_{5a} = 2.2 kΩ

Part b: I_S = 5 mA R_{3b} = 100 Ω R_{4b} = 120 Ω R_{5b} = 120 Ω

Section 1.5.4 – Thevenin and Norton Equivalent Circuits (Figure 1.11 on Page 1-18)

V_{in} = 20 volts R_{11} = 10 kΩ R_{12} = 20 kΩ R_{13} = 10 kΩ

R_{14} = 20 k Ω R_{15} = 10 kΩ

Decade Resistance Box (R_L) Values:

(i) $R_L = \infty$ (open circuit)

(ii) $R_L = R_{16}$ = 20 kΩ

(iii) $R_L = R_{17}$ = 10 kΩ

(iv) $R_L = R_{18}$ = 5 kΩ

(v) R_L = 0 Ω (short circuit)

Design Problem:

Omit Sections 1.6.5.4 – 1.6.5.5 on page 1-23

Report Grading:

Data Sheets:	10 points	
Section 1.6.1:	16 points	parts 1.6.1.1 – 1.6.1.4 (4 points each)
Section 1.6.2:	24 points	parts 1.6.2.1 – 1.6.2.8 (3 points each)
Section 1.6.3:	20 points	parts 1.6.3.1 – 1.6.3.4 (5 points each)
Section 1.6.4:	20 points	parts 1.6.4.1 (5 points), 1.6.4.2 – 1.6.4.6 (3 points each)
Section 1.6.5:	10 points	parts 1.6.5.1 – 1.6.5.2 (3 points each), 1.6.5.3 (4 points)