

# JEE2330 – Spring 2025

## Lab #3 Values and Notes

### Experimental Procedures:

#### Section 3.5.1 – AC Analysis of a RC Circuit

$V_1 = 20$  volts peak-to-peak

$R_1 = 10\text{ k}\Omega$     $C_1 = 0.1\text{ }\mu\text{F}$     $f_a = 200\text{ Hz}$

$R_2 = 1.5\text{ k}\Omega$     $C_2 = 0.02\text{ }\mu\text{F}$     $f_b = 2\text{ kHz}$

#### Section 3.5.2 – AC Analysis of a RLC Circuit

$V_2 = 20$  volts peak-to-peak

$R_3 = 2.7\text{ k}\Omega$     $C_3 = 0.1\text{ }\mu\text{F}$     $f_c = 200\text{ Hz}$

$R_4 = 10\text{ k}\Omega$     $L_1 = 100\text{ mH}$     $f_d = 2\text{ kHz}$

#### Section 3.5.3 – RC Low-Pass Filter

$V_3 = 20$  volts peak-to-peak

$R_5 = 10\text{ k}\Omega$     $C_4 = 0.02\text{ }\mu\text{F}$

#### Section 3.5.4 – RC High-Pass Filter

$V_4 = 20$  volts peak-to-peak

$R_6 = 10\text{ k}\Omega$     $C_5 = 0.02\text{ }\mu\text{F}$

### Report:

Design Problem – Use  $R_L = 24\text{ k}\Omega$ .

### Report Grading:

<u>Data Sheets:</u>	10 points	
<u>Section 3.6.1:</u>	24 points	3.6.1.1 – 3.6.1.2 (8 points each), 3.6.1.3 – 3.6.1.4 (4 points each)
<u>Section 3.6.2:</u>	16 points	3.6.2.1 (8 points), 3.6.2.2 – 3.6.2.3 (4 points each)
<u>Section 3.6.3:</u>	20 points	3.6.3.1 – 3.6.3.2 (8 points each), 3.6.3.3 (4 points)
<u>Section 3.6.4:</u>	20 points	3.6.4.1 – 3.6.4.2 (8 points each), 3.6.4.3 (4 points)
<u>Section 3.6.5:</u>	10 points	3.6.5.1 (4 points), 3.6.5.2 (3 points), 3.6.5.3 (3 points)