

EE4226 - EXPERIMENT #5

THREE PHASE CIRCUITS

Lab Section: 602

Name: Jacob Gok

Date: 2/28/18

Lab Partners: Mitch Marford

Part 1:

3.

	Magnitude	Angle
V_{AN}	0	0
V_{BN}	128	
V_{CN}	128	
V_0		
V_1		
V_2		
I_A	1.2 A	
I_B		
I_C		
I_0		
I_1		
I_2		

$$V_{pp} = 170$$

$$\text{Faulted } V_{pp} = 256$$

If 1.2A

Part 2:

8. Power Meter 1335 Wattmeter 1 670W Wattmeter 2 640W

V_{ab} 670W 208.13 V_{bc} 640 209.06 V_{ca} 209.65

I_a 3.2A I_b 3.2 I_c 3.3

I_{ab} 1.4A I_{bc} 1.6A I_{ca} 1.5

9. Power Meter 1345 Wattmeter 1 1100 Wattmeter 2 200

V_{ab} 3.2A 208.42 V_{bc} 209.24 V_{ca} 210.59

I_a 5.2 I_b 5.0 I_c 5.0

I_{ab} 2.7 I_{bc} 2.8 I_{ca} 2.8

$$\begin{array}{r} 670 \\ 640 \\ \hline 1310 \end{array}$$

Part 3:

13. Power Meter 1378 Wattmeter 1 698 Wattmeter 2 650

V_{ab} <u>207.90</u>	V_{bc} <u>208.56</u>	V_{ca} <u>210.22</u>
V_{an} <u>120.70</u>	V_{bn} <u>119.94</u>	V_{cn} <u>121.26</u>
I_a <u>3.4</u>	I_b <u>3.2</u>	I_c <u>3.4</u>
I_n <u>0</u>		

14. Power Meter 1367 Wattmeter 1 1100 Wattmeter 2 220

V_{ab} <u>208.49</u>	V_{bc} <u>209.67</u>	V_{ca} <u>210.48</u>
V_{an} <u>120.91</u>	V_{bn} <u>120.40</u>	V_{cn} <u>121.36</u>
I_a <u>5.2</u>	I_b <u>5.1</u>	I_c <u>5.2</u>
I_n <u>0.9</u>		

Part 4:

17. Power Meter 899 Wattmeter 1 680 Wattmeter 2 0

V_{ab} <u>208.28</u>	V_{bc} <u>209.60</u>	V_{ca} <u>211.39</u>
V_{an} <u>120.66</u>	V_{bn} <u>120.37</u>	V_{cn} <u>122.61</u>
I_a <u>3.4</u>	I_b <u>3.3</u>	I_c <u>0</u>
I_n <u>3.4</u>		

18. Power Meter 677 Wattmeter 1 680 Wattmeter 2 0

V_{ab} <u>208.31</u>	V_{bc} <u>210.11</u>	V_{ca} <u>212.36</u>
V_{an} <u>121.28</u>	V_{bn} <u>120.57</u>	V_{cn} <u>122.55</u>
I_a <u>3</u>	I_b <u>2.9</u>	I_c <u>0</u>