**Queensborough Community College**

The City University of New York

**Department of Engineering Technology**

**ET 110 – Introduction to Circuit Analysis Laboratory**

**Lab#1**

**Math Review**

**Professor: HUiXIN WU**

**Date 8/26/16**

**Student Name: XIN SHEN**

**State the Objectives of this lab exercise**

* Power of ten and scientific notation
* Engineer notation and prefix notation
* Understanding the different between scientific notation and engineer notation
* Learn how to calculate them
* Use the prefix name and symbol to convert the quantity indicated

**Experimental**

* **Table 1.4**

1. 0.22µF
2. 700 mV
3. 1.5 mA
4. 0.0935MHz

* **Table 1.5**

1. 70µA
2. 3.3MR
3. 67kV
4. 35mA
5. 5.4W
6. 7.453MHz
7. 6ns

* **Table 1.6**

1. 6,252\*10³
2. -252\*10-3
3. 2.410\*103
4. 2.72\*109
5. 5.4\*10-6
6. 90\*10-3
7. 833,333,333,333.333\*10-3
8. -4
9. 160\*109
10. 27\*10-12

**Questions**

1. 1.5kW
2. 1.824GW
3. 7.333\*106 toaster ovens could be turned on at the same time
4. 0.765MV

**Conclusion**

In this lab, I learned about the different between the scientific notation and engineering notation. In fact, I realized the elementals of them is in scientific notation the mantissa between not smaller than 1 and not great than 10. For example, 11\*109 is not a completed scientific notation, it should be 1.1\*1010. However, in the engineering notation, the number could be from 1 to less than 1000. In addition, the exponent had to be able to divide by 3, otherwise, it still not an engineering notation. To illustrate, 123\*105 is not a correct way to use the engineering notation. It should be look like 12.3\*106 which the exponent 6 could be division by 3. Furthermore, we also review the way to calculate the power of ten and how to use the prefix notation to convert the quantity indicated. Thus, I understand the name and the symbol for the prefix and way to use them when it has been requested.