CMGT 235 – Electrical and Mechanical Systems Homework #23 – Voltage Drop Due: 11/16/2021 Points: 20

Name: \_\_\_\_\_

NEC 2017 Edition, Chapter 9 Tables **Conductor Resistance** Table 8 Conductor Properties – for DC Table 9 Alternating-Current Resistance – for AC

1. What is the voltage drop of two 12 AWG THHN conductors in a PVC Conduit that supply 16A, 120V AC load located 100 feet from the power supply? Use Uncoated Copper Wires.

2. What is the percentage voltage loss for the circuit in problem 1?

3. What is the Effective Z at 0.85 PF for Uncoated AWG 10 Copper Wire in a steel conduit?

4. Calculate the length a 12V DC AWG 16 uncoated stranded copper wire that supplies 2.4 A can be if the voltage drop is limited to 5%.