EXPERIMENT NO. 1
ANALOG AND DIGITAL VOM

I. Objective

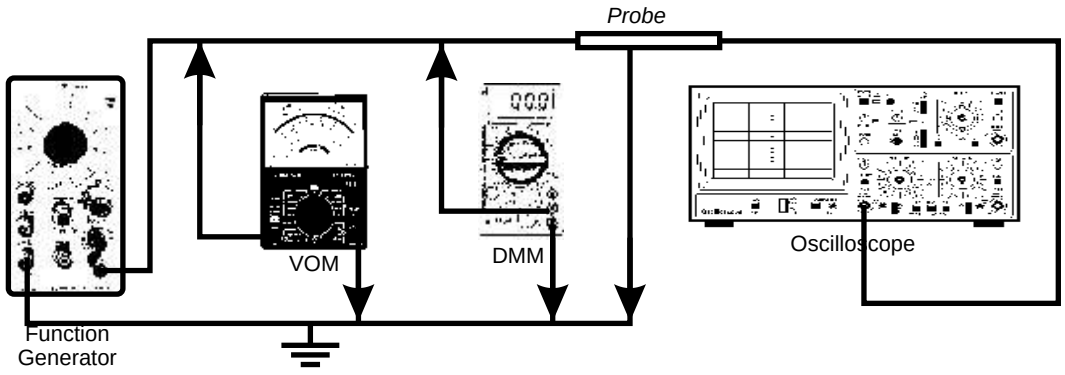
To be able to compare the accuracy of the analog and digital VOM with that of the oscilloscope in measuring the magnitude of the different AC signals.

II. Materials

Analog VOM
Digital Multi-meter (DMM)
Function Generator
Oscilloscope
connecting wires with alligator clips

III. Procedure

1. Assemble the given circuit diagram below and set the analog and digital VOM to the appropriate AC voltage measurements. Set the function generator to sine wave function. Adjust its frequency, setting to 60Hz and set it to the maximum voltage output.



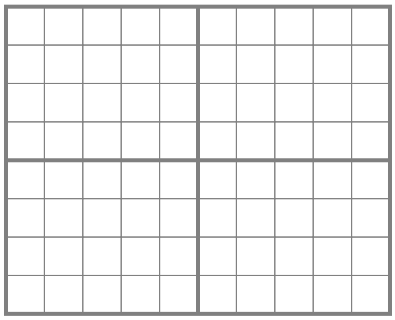
2. Record the voltage reading.

   V_{AC} *(Analog VOM)* = _____

   V_{AC} *(DMM)* = _____

   V_{P-P} *(Oscilloscope)* = _____

3. Convert the V_{P-P} reading of the oscilloscope into rms voltage value. V_{rms} = _____. Draw the output waveform.



4. Set the function generator to square wave function. Adjust its frequency, setting to 60Hz and set it to the maximum voltage output.

5. Measure the output voltage of the function generator by using the analog VOM, Digital Multi-meter and oscilloscope.

6. Record the voltage reading.

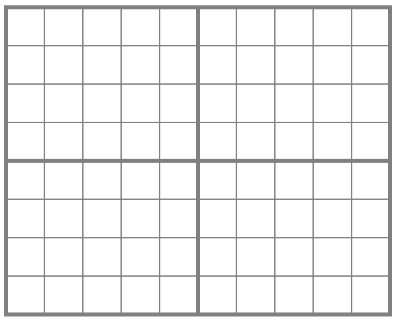
   V_{AC} *(Analog VOM)* = _____

   V_{AC} *(DMM)* = _____

   V_{P-P} *(Oscilloscope)* = _____

   V_{rms} = _____

7. Draw the output waveform.



8. Set the function generator to triangular wave function. Adjust the frequency setting to 60Hz and again set the attenuator for maximum output voltage.

9. Measure the output voltage of the function generator by using the analog VOM, Digital Multi-meter and oscilloscope.

10. Record the voltage reading.

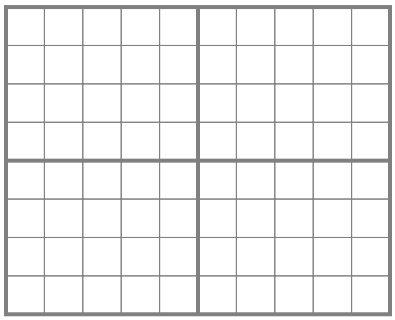
V_{AC} *(Analog VOM)* = _____

V_{AC} *(DMM)* = _____

V_{P-P} *(Oscilloscope)* = _____

V_{rms} = _____

11. Draw the output waveform.



IV. Discussion

V. Observation

VI. Conclusion