Using a Digital Multimeter


There are several reasons why these meters might not work.

a. The battery may be dead
b. The lead wires may be broken or intermittent
c. The fuse may have been blown by a careless student
d. The meter itself may be defective

Consequently the first order of business is to check that the meter is working properly.

1. If the meter has an on/off switch, turn it on.
2. Set the meter to a resistance scale and touch the two probe tips together. The meter should read 0 ohms or very close. If it does not, see the instructor. Repeat for each of the resistance scales.

3. Next use a 1.5 volt battery and a 9 volt battery to check two different voltage scales
4. Assuming the meter worked properly, you are to use the meter to find the following:
    a. Cold Resistance of a 7.5 Watt bulb
    b. Maximum DC output voltage of the variable power supply
    c. Maximum AC output voltage of the variable power supply
    d. Resistance of several carbon resistors
        (A) Resistance _____Colors_____
        (B) Resistance _____Colors_____
        (C) Resistance _____Colors_____
        (D) Resistance _____Colors_____
        (E) Resistance _____Colors_____
5. At the end turn the on/off switch to off. If the meter does not have an on/off switch, then turn the round scale selector switch to the “off” position.