ELEC 88.81 Lab 3 Measuring the Output of a Power Supply

OBJECTIVES:

1. Set up computer and check that it is working.
2. Measure the output voltages from the power supply and the hard drive.
3. Document the lab activities.

INSTRUCTIONS:

1) **Set Up Student PC And Check That It Is Working.**
   a) Use the cables from the KVM switch and hook them up to your Student PC desktop. Make sure you connect the following:
      i) monitor, keyboard, mouse
      ii) You will need a power cable
   b) Turn your computer on.
   c) Confirm that the OS loads.

2) **Prepare Student PC**
   a) Shut down the Student PC, disconnect power cable.
   b) Consult your service manual for instructions on removing the cover and rotating the power supply.
   c) Open the cover and rotate the power supply so you can access the power connector.
   d) Remove the power connector to the hard drive.
   e) When you are ready, raise your hand and I will come over and inspect you PC **before** you turn it on.

3) **Measure the Output Voltages from the Power Supply**
   a) Measure the voltages of the power connector to the motherboard and one of the hard drive connectors. There are instructions are on pages 1222 to 1228 in your text book.
   b) When you take a voltage measurement record it in the table on the green sheet.

4) **Document the Lab Activities**
   a) Use the Computer Repair Work Log to write down all of steps taken during the lab.

Example:

Date	Description of Activity
2/14	• Set up computer – OS loads OR • Set up computer – OS loads but floppy is NOT working
	Tested output voltages – All within 10% tolerance OR Tested output voltages – Pin 10 voltage below tolerance (10 v)

ELEC 88.81 **Lab3** **Name _____**

Measuring the Output of a Power Supply

Computer Name: Student PC _____

Connection	Pin	Lead Color	Voltage Rating	Acceptable Range	Measured Voltage
P1	1	Red	+5V		
	2	Black	Ground		
	3	Red	+5V		
	4	Black	Ground		
	5	Orange	Power Good		
	6	Purple	+5 V		
	7	Yellow	+12V		
	8	Blue	Power Good		
	9	Black	Ground		
	10	Black	Ground		
	11	Blue/White	+3.3V		
	12	Blue/White	+3.3V		
	13	Gray	PS ON		
	14	Black	Ground		
	15	Black	Ground		
	16	Black	Ground		
	17		N C		
	18	Red	+5V		
	19	Red	+5 V		
	20	Red	+5 V		
	21		N C		
	22	Red	+5V		
	23	Blue/White			
	24	Black	Ground		

Connection	Lead	Lead Color	Description	Acceptable Range	Measured Voltage
Hard Drive	1	Yellow	+12 V		
	2	Black	Ground		
	3	Black	Ground		
	4	Red	+5 V		

Determine the power consumption needs of your system.

1. How many watts are supplied by your power supply? _____
2. How many cables are supplied by your power supply? _____
3. Where does each cable lead?