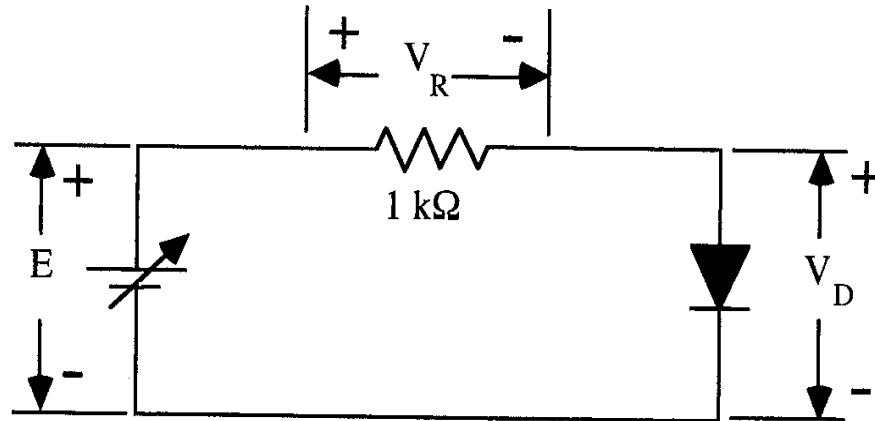# Lab 1
Diode Characteristics
Jeff Morrison

Objective

- Become familiar with checking diodes using VOMs
- Investigate forward and reverse-biased characteristics of diodes.
- Learn how to determine the DC and AC resistance of a diode
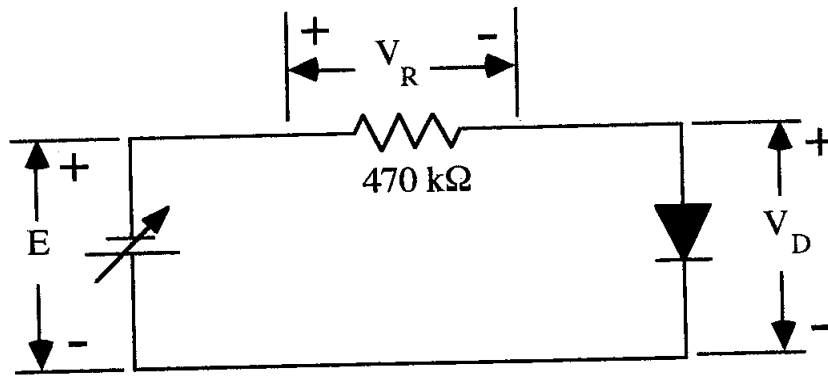- Demonstrate the function of diodes in basic logic circuits
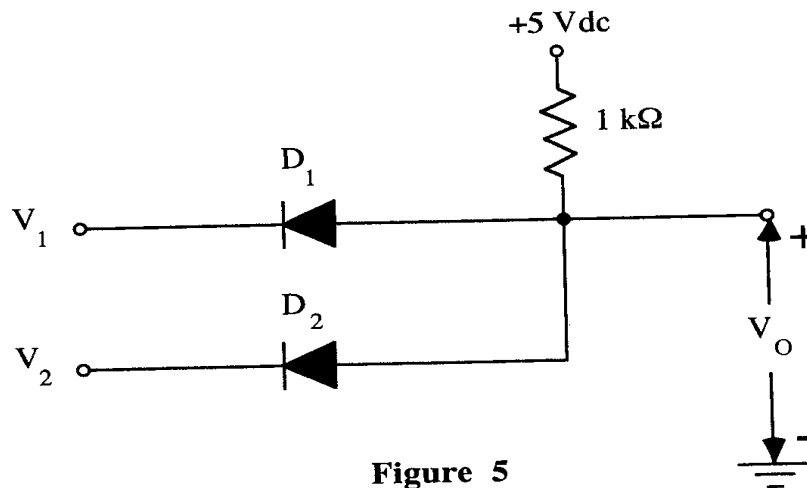
Results

Figure 3

Table 1

Vd	E	Vr	I
0.0V	0V	0V	0A
0.2V	.18V	.02mV	.024uA
0.4V	.40V	7.8mV	7.8uA
0.45V	.48V	31.6mV	.0316mA
0.5V	.63V	.13V	.13mA
0.55V	1.03V	.48V	.48mA
0.6V	2.07V	1.48V	1.48mA

Figure 4

Table 2

Vd	E	Vr	I
0V	0V	0V	0A
-5V	5.03V	.03V	.064mA
-10V	10.04V	.04V	.085mA
-15V	15.04V	.04V	.085mA
-20V	20.04V	.04V	.085mA
-25V	25.05V	.05V	.106mA

Figure 5

Table 3

V1	V2	Vd
0V	0V	0.6V
0V	5V	0.6V
5V	0V	0.6V
5V	5V	5.0V
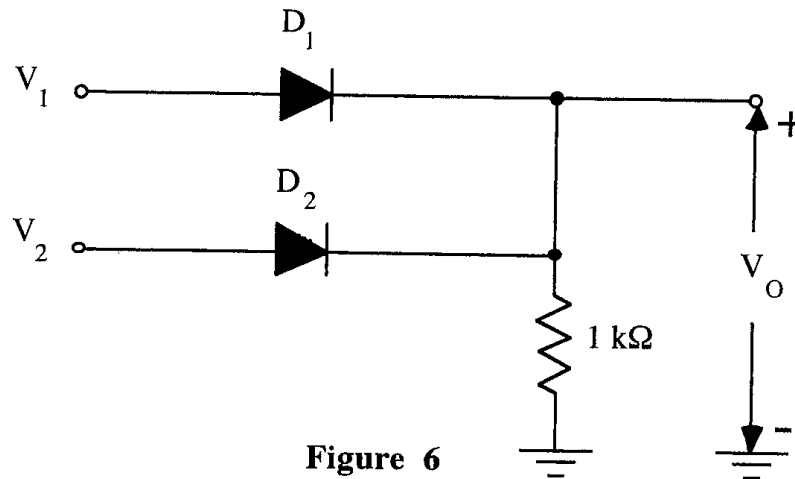
Figure 6

Table 4

V1	V2	Vd
0V	0V	0.0V
0V	5V	5.0V
5V	0V	5.0V
5V	5V	5.0V

Analysis
Basic diodes can be used in a circuit design to ensure that current is only able to flow in a certain direction.

Conclusion
Diodes are useful to control current-flow in circuits.
They also provide a means of constructing certain basic types of logic gates (such as AND and OR as demonstrated in this lab)