**Stu.ID: Name:**

**Answer Sheet\_Lab 1: I-V Curve and Diodes**

**Task 1 – Hardware Construction:**

c.

**d. Vout = Vin \*Duty Cycle.**

**Task 2 – Measurement of a resistor**

**Exercise:**

d.

e.

1) 0.0005584165788(V=I/R, so the slope here is 1/R)

2) 0.00004545454545

3)No,

1.AnalogWite() precision limitation.

2. The resistance of cable will make the error

4)

5)No,The orientation of the resistor will not change the resistance.

**Task 3 – Measurement of 1N4148 diode:**

d.

**Task 4 – Measurement of Zener diode:**

d. 3.3 V Zener Diode

e. 2.7 V Zener Diode

**Question: From Task 2 to Task 4, can you identify the features of the general resistor, 1N4148 diode and Zener diode?**

1. **resistor: In a graph with voltage on the x-axis and current on the y-axis, the slope is a straight line.**
2. **Diode: when the connected voltage is greater than Forward Voltage, the voltage will change fast with the low current change. The current only can normally pass the diode by the specific orientation. If connected inversely, when the voltage over the constant value, the diode will be burned .**
3. **Zener diode: The diode can be connected regardless of the orientation of the diode.**

**PLEASE UPLOAD THE ANSWER SHEET TO CANVAS/ASSIGNMENTS/LAB 1**