ELEC 2210 Fall 2020

Lab 8 Quiz

Name: _____

Section: _____

1. How can you make the current flowing through an IR LED increase linearly with voltage?
    a. Add a capacitor in series
    b. Add a resistor in series (this option)
    c. Add a resistor in parallel
    d. Add a diode in series

2. What is the main difference between the photo transistor we are using today and the bipolar junction transistor we used in the previous lab?

    For photo Transistor, base current is produced and controlled by light instead of voltage source. In BJT, 2 p-n junctions are connected back to back and the base current is controlled by the voltage source.

3. The equation used by the NI ELVIS board to calculate the instantaneous amplitude of an AM signal is: $A = A_C(1 + K_2V_{IN})$. Find the maximum value of A when the magnitude of the carrier is 10V and the input signal is 5V. K_2 is 0.1.

    Ac=10v, Vin=5v, K=0.1

    For max value:

        A = Ac(1+K*Vin)

        A = 10I1+0.1*5)

        A = 15v

        Max value of A is 15v