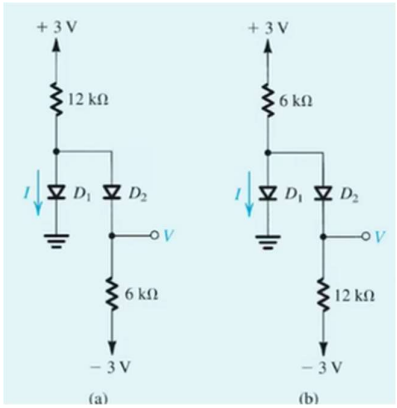
Assignment No. 1

Analog Electronics (ECE-261)

Note: Submission deadline 22-09-2022 (4 pm).

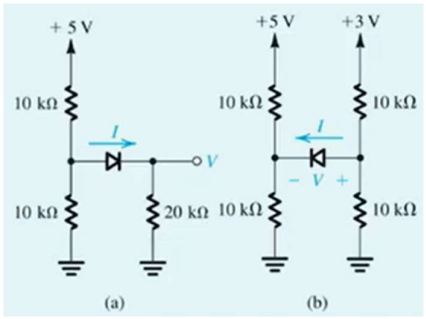
Assuming the diodes in the circuits are ideal, find the values of the labeled voltage and currents.

Q1.



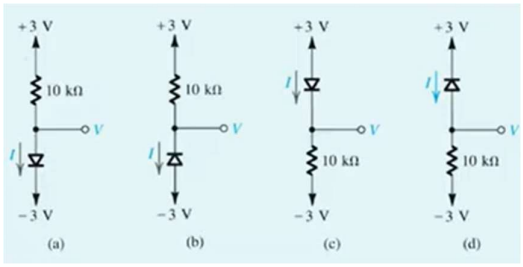
Ans: (a) 0A, -1V. and (b) 0.25mA and 0V

Q2.



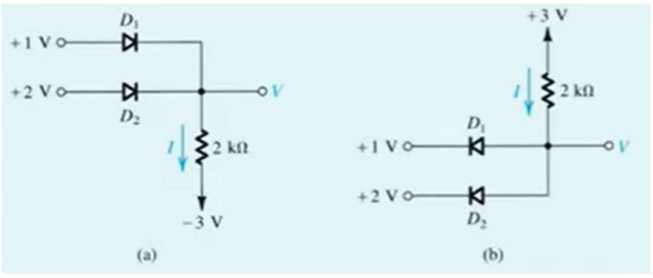
Ans: (a) 0.1mA, 2V and (b) 0A and -1V

Q3.



Ans: (a) 0.6mA, -3V and (b) 0A and 3V, (c) 0.6mA, 3V, and (d) 0A and -3V

Q4.

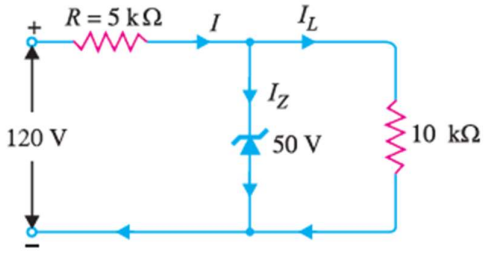


Ans: (a) 2.5mA, 2V. and (b) 1mA and 1V

Q5. A diode for which the forward voltage drop is 0.7V at 1mA is operated at 0.5V. What is the value of the current?

Ans: 0.335 micro Amp.

Q6. For the circuit shown, find: (i) the output voltage (ii) the voltage drop across series resistance (iii) the current through the Zener diode.



Ans: 50V, 70V, & 9 mA

Q7. Design a clamper circuit that biases the AC waveform so it lies completely below (negative) the zero line: