



- Answer all the following questions
- Illustrate your answers with sketches when necessary

- No. of questions: 3 + 1 bonus
- Total Mark: 40 Marks

Question 1 | **15 marks**

- Find the values of I and V for the circuit of Fig. 1, assuming that $V_{D1} = V_{D2} = 0.7\text{ V}$.
- Draw the voltage doubler circuit and mention in 4 lines the theory of operation. In the same manner, suggest the circuit diagram of the voltage tripler circuit.

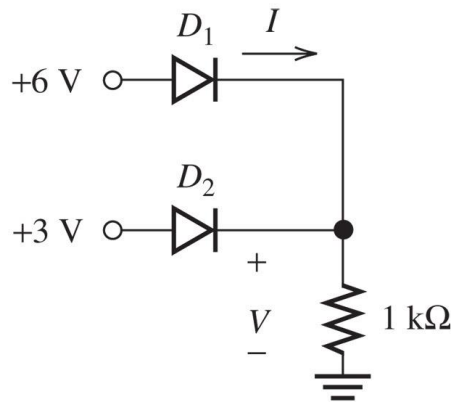


Figure 1

Question 2 | **5 marks**

Consider the diode circuit in Fig. 2. Obtain and plot the I_X - V_X characteristics of the circuit given below. Assume the diode is ideal and $R_1 = R_2 = 25k$

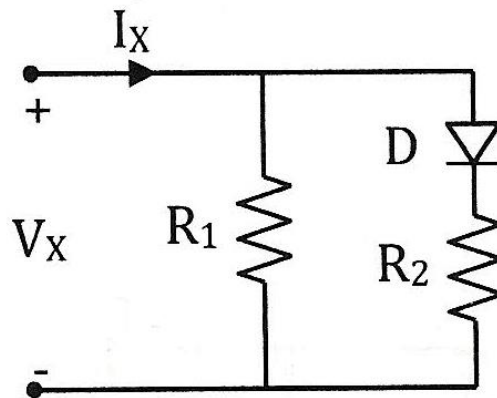


Figure 2

