Homework 2

(1)The input voltage $U = 10\sin(\omega t)$ V, draw the output waveforms of V in the circuits shown in Figure: (1a) and (1b). The diodes are modelled with a constant voltage drop model with $e_{fd} = 0.7$ V.
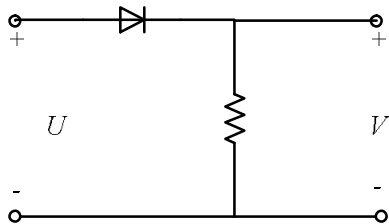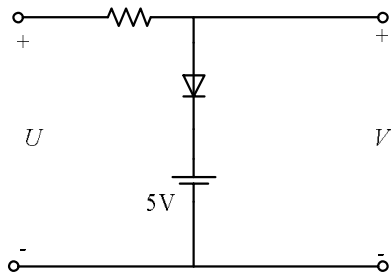

Figure: (1a)

Figure: (1b)

(2)Determine V and I_A, I_B, I_C in the following circuit when

$$(a)U_A = U_B = 0$$
$$(b)U_A = 4\text{V}, U_B = 0$$
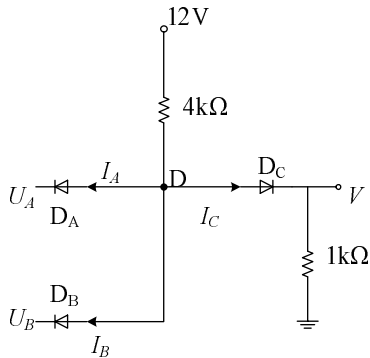$$(c)U_A = U_B = 4\text{V}$$

The diodes are ideal.

Figure: 2

(3)Draw the transfer characteristics (U versus V) for the circuits shown below. U is the input voltage and V is the output voltage. The diodes are modelled with a constant voltage drop model with $e_{fd} = 0.7$ V.
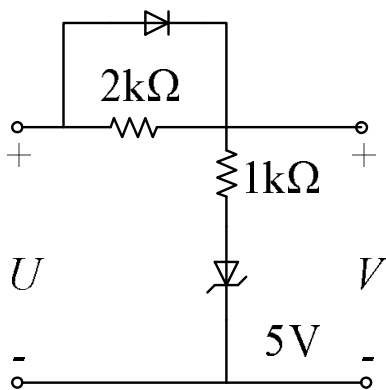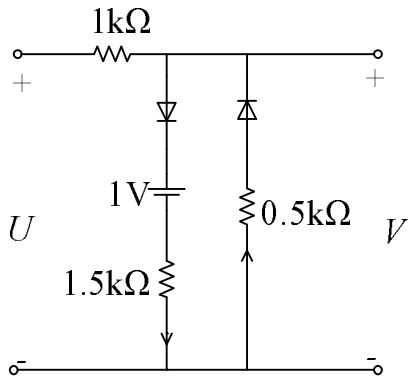

Figure: (3a)

Figure: (3b)