CSE251-07
SUMMER 25 **Deadline: 23 July, 2025**
ASSIGNMENT 2(part-1) **(07:59 am)**

The goal of this assignment is to test your concept and knowledge of:

- Diode Circuits
- Diode Logic Gates

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1. [5 marks] Analyze the circuit in Figure-2, and calculate VX, VY , ID1, and ID2 using the method of assumed states. You must validate your assumptions. Use VD0 = 0.7V for both diodes.

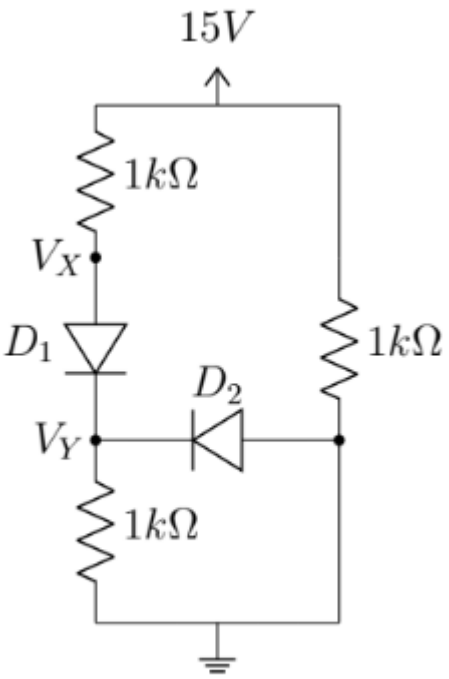
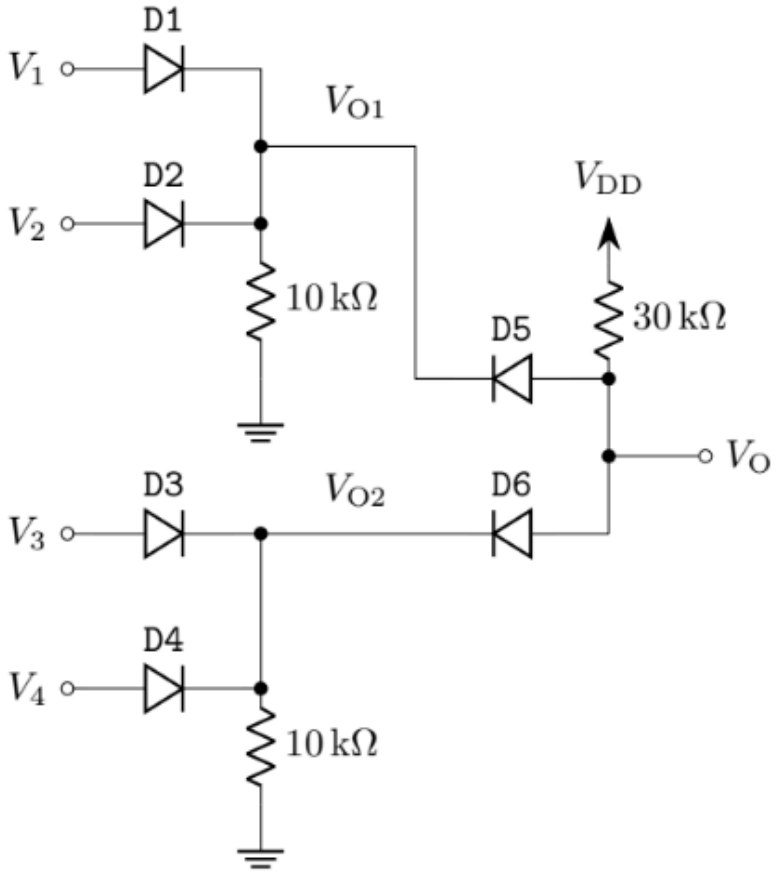


Figure-2

2. [5 marks] In the adjacent circuit $V_{DD} = 5\,V$ and other parameters are as follows:

Input Voltages	Diode Barrier Voltages
$V_1 = 2.0\,V$	For D1: $V_{D1} = 0.3\,V$
$V_2 = 2.2\,V$	For D2: $V_{D2} = 0.7\,V$
$V_3 = 2.4\,V$	For D3: $V_{D3} = 0.5\,V$
$V_4 = 2.5\,V$	For D4: $V_{D4} = 0.9\,V$

For D5 & D6: $V_{D5} = V_{D6} = 1\,V$



(a) [3 marks] Determine the values of Vo1 and Vo2.

(b) [2 marks] Calculate the value of Vo.