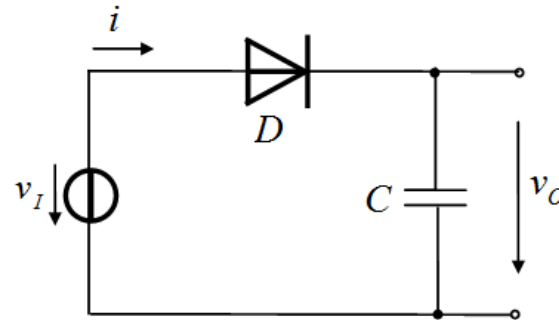


Homework 2 – DC switching circuits



$v_I(t) = 5\sin 2\pi \cdot 3 \cdot t$ [V][KHz], $C = 330$ nF,
 D – constant voltage drop model, $V_{D, on} = 0.7$ V

- Draw $v_D(t)$, $v_O(t)$ and specify the application of the circuit.
- Connect a resistance R at the output of the circuit. Size R to obtain the maximum value of the output voltage ripple $\Delta v_O = 0.5$ V. Redraw $v_O(t)$.
- Modify the initial circuit to obtain a voltage doubler. Draw $v_O(t)$ for the new circuit.