

Answers to EEE210 Quiz #2 AY2013-2014

1. $V_D(0^+) = -2 \text{ V} \Rightarrow D$ is initially reverse biased off. D switches to reverse conduction at time $t_0 = 24 \text{ ms}$. Finally:

$$i_L(t) = \begin{cases} 5 - 5 e^{-t/(47 \text{ ms})} \text{ V} & \text{if } t \leq t_0 = 24 \text{ ms} \\ 2 \text{ V} & \text{if } t \geq t_0 = 24 \text{ ms} \end{cases}$$

2. $V_{GS} = 4.05 \text{ V}$, $I_D = 1.41 \text{ mA}$, $V_{DS} = 8.17 \text{ V}$.