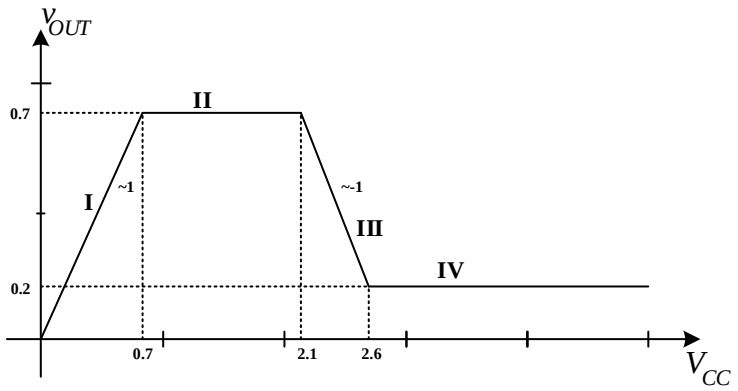
Osnovi analogne elektronike	19E042OAE	5.12.2021.
Osnovi elektronike	19E042OE	
Elementi elektronike (2013)	13E042EE i 13E042EEG	

Kolokvijum – rešenja

1. $I_D \approx 3.94\text{mA}$, $a_v \approx 0.98$, $R_u \approx 2.28\text{M}\Omega$, $a_i \approx 22.30$



2.

$$\text{I: } v_{OUT} = V_{CC};\ D \to OFF, Q \to OFF$$

$$\text{II: } v_{OUT} = V_D = 0.7V;\ D \to ON, Q \to OFF$$

$$\text{III: } v_{OUT} = V_{CC}\left(\frac{1}{R_3} - \frac{\beta}{2R_T}\right) + \frac{\beta V_{BE}}{R_T} - \frac{V_D}{R_3} = -0.05s\, V_{CC} + 0.105;\ D \to ON, Q \to ON_{DAR}$$

$$\text{III: } v_{OUT} = V_{CES} = 0.2V;\ D \to ON, Q \to ON_{ZAS}$$