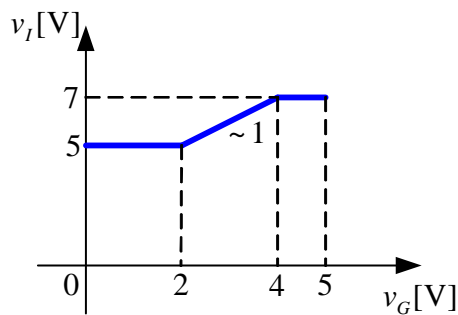


REŠENJA

2.

$$v_I[\text{V}] = \begin{cases} 5\text{V} = \text{const}; & \text{za } 0 \leq v_G \leq 2\text{V}; & D - \text{OFF}, DZ - \text{proboj} \\ v_G[\text{V}] + 3; & \text{za } 2\text{V} \leq v_G \leq 4\text{V}; & D - \text{ON}, DZ - \text{proboj} \\ 7\text{V} = \text{const}; & \text{za } 4\text{V} \leq v_G \leq 5\text{V}; & D - \text{ON}, DZ - \text{OFF} \end{cases}$$



3.

3) a) DC:  $A_D = \frac{R}{0.1R} = 10$        $v_{I1} - v_{I2} = 100\text{mV}(-1 + 4\text{sin}\omega t)$   
 AC:  $a_d = \frac{0.5R}{0.1R} = 5$        $v_{I1} - v_{I2} = V_D + v_d$   
 $v_I = v_{I1} + v_{I2}$   
 $= A_D V_D + a_d v_d$

$v_I = -1\text{V} + 2\text{V sin}\omega t$

b) ЈЕДНОСМЕРНО ПОЈАЧАЊЕ СЕ НЕ МЕЊА

AC ПОЈАЧАЊЕ:

$$v_i = -5v_2 + \frac{R \parallel 1.1R}{0.1R + R \parallel 1.1R} \cdot \left(1 + \frac{0.5R}{0.1R}\right) v_1$$

$$v_i = \frac{0.52}{0.62} \cdot 6 v_1 - 5v_2 = 5.03v_1 - 5v_2$$

$v_i = 15 \cdot (v_1 - v_2) + 0.03v_1$       ← ОДСТУПАЊЕ ОД ТАКВЕ а)

$v_I = -1\text{V} + 2\text{V sin}\omega t + 3\text{mV sin}\omega t$

$v_I = -1\text{V} + 2.003\text{V} \cdot \text{sin}\omega t$

