



ИСПИТ ИЗ ОСНОВА ЕЛЕКТРОТЕХНИКЕ 2

14. 09. 2015. - Рјешења

1.

$$\vec{B}_A = (-2,72\vec{i}_y + 0,39\vec{i}_z) \mu\text{T}.$$

2.

a) $\Phi(t) = \frac{1}{2} ab B_m \sin 2\omega t.$

б) $q = -\frac{ab B_m}{2R}.$

в) $e = -\omega ab B_m \cos 2\omega t.$

3.

a) $d_1 = b - c = 2 \text{ cm}, d_2 = c - a = 1 \text{ cm}.$

б) Слој (1) ради у линеарном режиму рада.

в) $\Phi = 93,15 \mu\text{Tm}^2.$

4.

a) $\omega = \frac{\sqrt{3}}{RC}.$

б) $U_C = \frac{R}{2} I_g.$

5.

a) $\omega_{r1} = 0, \omega_{r2} = 5500 \text{ rad/s}.$

б) $\omega_{a1} = 5000 \text{ rad/s}, \omega_{a2} = \infty.$

в) $I_{L\max} = 10\sqrt{2} \text{ A}, \psi_L = 0, U_{C\max} = 200\sqrt{2} \text{ V}, \theta_C = \frac{\pi}{2}.$

6.

$$\Delta U = -13,04 \text{ V}, \Delta U_3 = 23,28 \text{ V}.$$