



ИСПИТ ИЗ ОСНОВА ЕЛЕКТРОТЕХНИКЕ 1

26. 06. 2014. - Рјешења

1.

$$E = 18\sqrt{2} \text{ V/m.}$$

2.

a) $\varepsilon_{r2} = 2,5$, $d_1 = 4,14 \text{ mm}$ и $d_2 = 5,86 \text{ mm}$.

б) $\sigma' = 25 \mu\text{C/m}^2$, $\sigma'' = -6,24 \mu\text{C/m}^2$,

$$\sigma_{p1} = -20 \mu\text{C/m}^2, \quad \sigma_{p2} \approx 10 \mu\text{C/m}^2, \quad \sigma_{p3} = -7,5 \mu\text{C/m}^2, \quad \sigma_{p4} = 3,75 \mu\text{C/m}^2.$$

в) $C = 7,86 \text{ pC}$.

3.

a) $h = \frac{4}{5}a$.

б) 17%.

4.

$$U_{AB} = 20 \text{ V.}$$

5.

a) $E_1 = -70 \text{ V}$. $E_2 = 40 \text{ V}$.

б) $P_{E2} = E_2 I_{12} = 20 \text{ W}$.

6.

$$q = C[U_{AB2} - U_{AB1}] = -60 \mu\text{C}.$$