



ИСПИТ ИЗ ОСНОВА ЕЛЕКТРОТЕХНИКЕ 1

23. 10. 2013. - Рјешења

1.

$$a) \quad E = \left\{ \begin{array}{l} 0, r < a \\ \frac{q'}{2\pi\epsilon_0 r}, a \leq r \leq b \\ 0, b < r < c \\ \frac{q'}{2\pi\epsilon_0 r}, c \leq r \leq d \\ 0, r > d \end{array} \right\}.$$

$$б) \quad U_{ba} = 2U_{dc} \Rightarrow \ln \frac{b}{a} = 2 \ln \frac{d}{c} \Rightarrow d = 10 \text{ mm.}$$

2.

$$U' = 40 \text{ V,}$$

$$C' = 1,25 \text{ nF.}$$

3.

$$U_7 = R_7 I_7 = 47 \text{ V.}$$

4.

$$R_4 = 295 \Omega.$$

$$Q = -77 \mu\text{C.}$$