MI iz ELEKTRONIKE 1, tablica točnih odgovora teoretskog dijela ispita

Grupa	**A**	**B**	**C**	**D**
1.	c	a	b	d
2.	a	c	d	b
3.	e	e	a	c
4.	c	b	d	e
5.	d	d	c	a
6.	c	a	b	d
7.	b	e	e	c

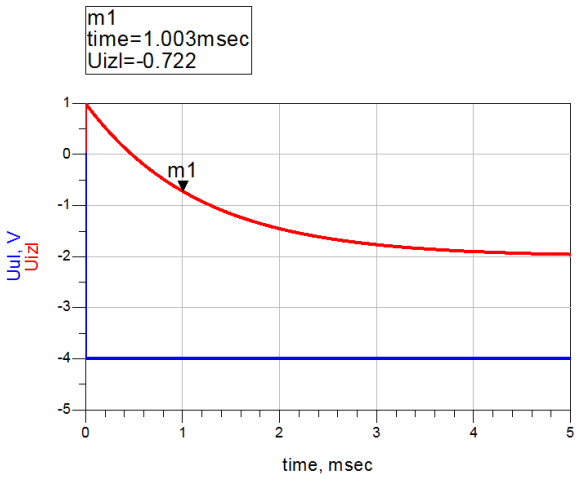
ZADACI :

1.

a) $u_{izl} = u_{C2} = (C_1 / (C_1 + C_2)) * u_{C12}$
$u_{C12} = U_{C0} + (u_{ul} - U_{C0})(1 - \exp(-t/\tau))$
$U_{C0} = U_{C1} + U_{C2}$

b) u_{izl} (t = 0 ms) = 1 V
u_{izl} (t = 1 ms) = -0.719 V
u_{izl} (t = ∞) = -2 V

c)



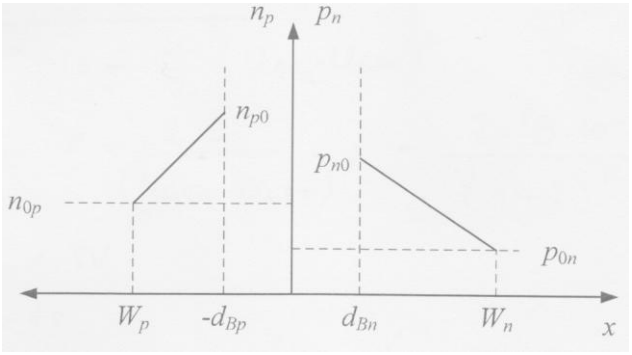
2.

a) poluvodič *p* tipa
$p = 1.11*10^{17}$ cm^{-3}
$n = 1.89*10^{3}$ cm^{-3}

b) $N_D = 1.368 * 10^{17}$ cm^{-3}

3.

a) $I_D = 0.6$ mA
b) $n_{p0} = 6.5*10^{12}$ cm^{-3}
   $p_{n0} = 5.2*10^{12}$ cm^{-3}
c) r_d ($U_D = 0.5$ V) = 46.2 Ω
   r_d ($U_D = -0.5$ V) = ∞



4.

a) $U_{GS0A} = U_{GSA} - U_{DSA} = -2$ V , $U_{GS0B} = U_{GS0A}$
   $I_{DB} = 13.5$ mA
   $g_m = 6$ mA/V
   $r_d = 166.67$ Ω
   $\mu = g_m * r_d = 1$