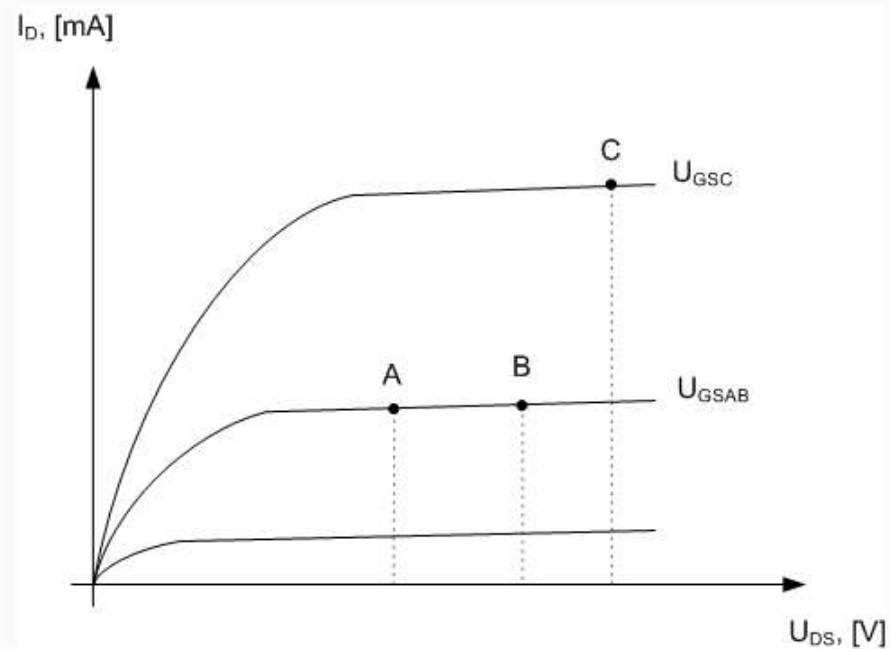


1

Marks: 1

Izlazna karakteristika nekog MOSFET-a prikazana je na slici. Napon praga tranzistora iznosi $U_{GS0} = -0,75$ V. Poznati su naponi $U_{GSAB} = -2$ V, $U_{GSC} = -3,25$ V, $U_{DSA} = -3$ V, $U_{DSB} = -5$ V i $U_{DSC} = -6$ V te struje $I_{DA} = -500$ μ A i $I_{DB} = -503$ μ A. Odrediti struju i strminu u točki C.



Odaberite jedan odgovor.

☐ a.
 $I_{DC} = -1,009$ mA, $g_{mC} = 807,2$ μ A/V

x

☐ b.
 $I_{DC} = -1,009$ mA, $g_{mC} = 1,6144$ mA/V

x

$U_{DS}, [V]$

Odaberite jedan odgovor.



a.

$I_{DC} = -1,009 \text{ mA}$, $g_{mC} = 807,2 \text{ } \mu\text{A/V}$

x



b.

$I_{DC} = -1,009 \text{ mA}$, $g_{mC} = 1,6144 \text{ mA/V}$

x



c.

$I_{DC} = -2,018 \text{ mA}$, $g_{mC} = 3,8054 \text{ mA/V}$

x



d.

$I_{DC} = -2,018 \text{ mA}$, $g_{mC} = 1,6144 \text{ mA/V}$

✓



e.

$I_{DC} = -1,9027 \text{ mA}$, $g_{mC} = 3,8054 \text{ mA/V}$

x

Netočno

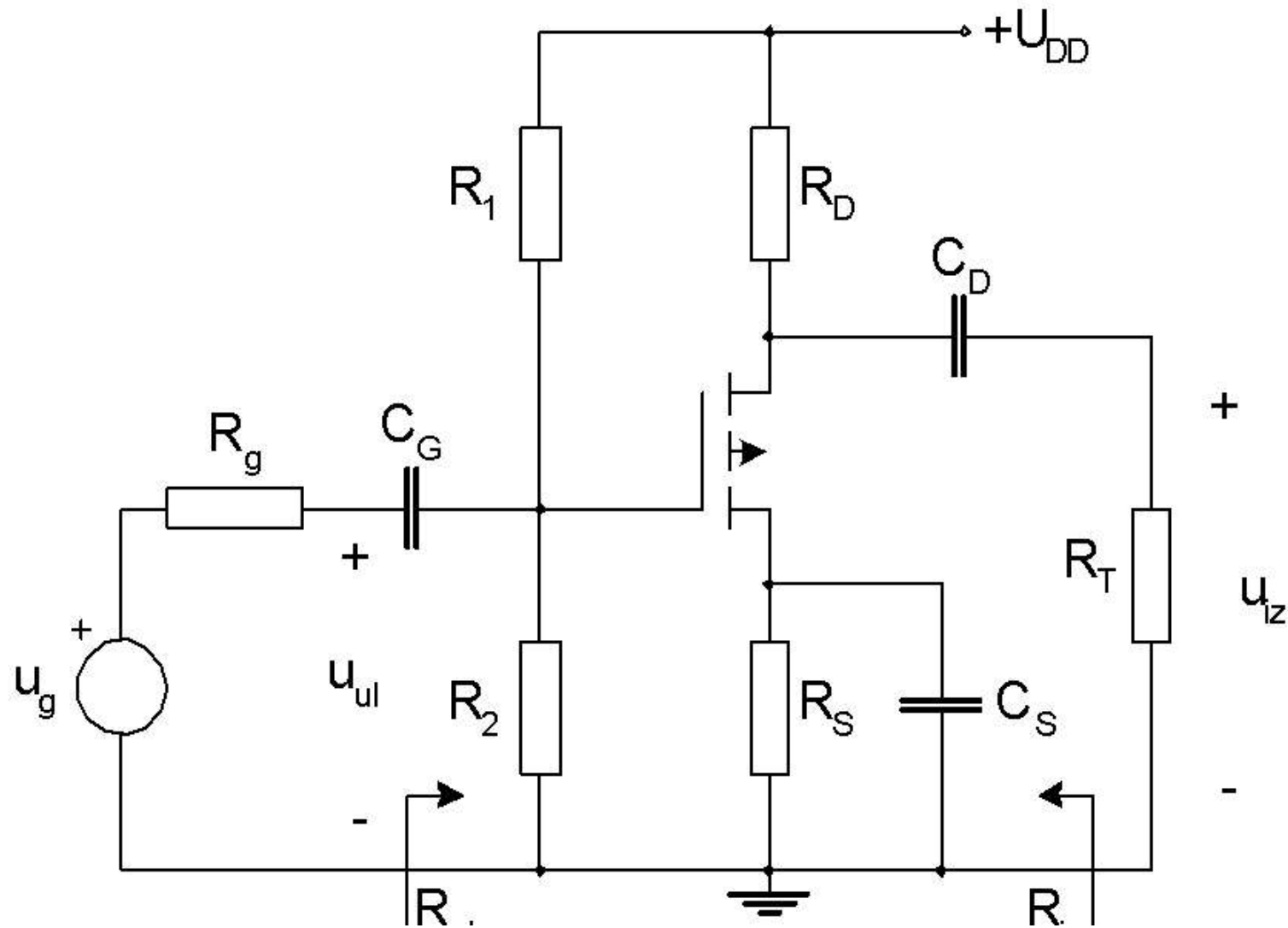
Marks for this submission: 0/1.

2

U početku se diode zadane iz: $U_{GS} = 18 \text{ V}$, $R_1 = 500 \text{ } \Omega$, $R_2 = 3,9 \text{ M}\Omega$, $R_3 = 1,2 \text{ M}\Omega$, $R_4 = 3,3 \text{ k}\Omega$, $R_5 = 4,7 \text{ k}\Omega$ i $R_6 = 820 \text{ } \Omega$. Parametri n-kanalnog MOSFET-a

Marks: 1

U pojačalu sa slike zadano je: $U_{DD} = -18\text{ V}$, $R_g = 500\ \Omega$, $R_1 = 3,9\text{ M}\Omega$, $R_2 = 1,2\text{ M}\Omega$, $R_D = 3,3\text{ k}\Omega$, $R_T = 4,7\text{ k}\Omega$ i $R_S = 820\ \Omega$. Parametri p -kanalnog MOSFET-a su $K = -2,1\text{ mA/V}^2$, $U_{GS0} = -1\text{ V}$ i $\lambda = -0,004\text{ V}^{-1}$. Odrediti naponsko pojačanje $A_V = u_{iz}/u_{ul}$ i izlazni otpor R_{iz} pojačala.



$|R_{ul}|$  $R_{iz}|$

Odaberite jedan odgovor.

☒ a.
 $A_V = -5,9843$, $R_{iz} = 3,2075 \text{ k}\Omega$



☐ b.
 $A_V = 0,68537$, $R_{iz} = 228,98 \Omega$



☐ c.
 $A_V = -9,5923$, $R_{iz} = 3,0164 \text{ k}\Omega$



☐ d.
 $A_V = 9,5923$, $R_{iz} = 3,0164 \text{ k}\Omega$



☐ e.
 $A_V = 5,9843$, $R_{iz} = 3,2075 \text{ k}\Omega$



Točno

Marks for this submission: 1/1.