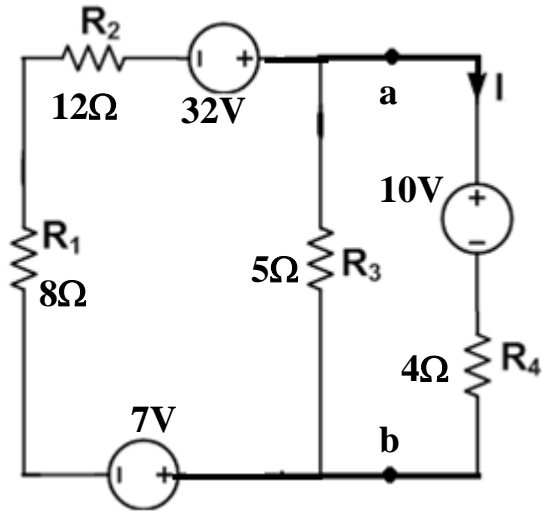


Câu 1 (1.5đ):

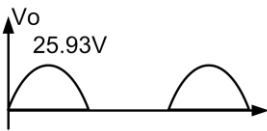
$R_{TH} = (R_1 + R_2) // R_3 = 4\Omega$ 0.5đ

$U_{ab} = U_{TH} = R_3 \frac{32 - 7}{R_1 + R_2 + R_3} = 5V$ 0.5đ

$I = \frac{-5 + 10}{R_{TH} + R_4} = -0.625A$ 0.5đ



Câu 2 (3đ)



$V_{ODC} = V_{om} / \pi = 8.25V$ 0.25đ

$I_{D(DC)} = V_{ODC} / R_L = 0.031A$ 0.25đ

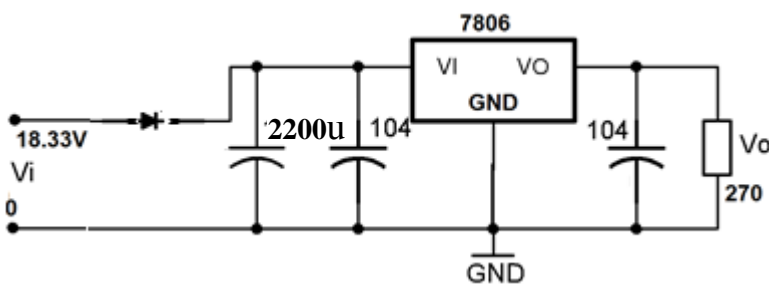
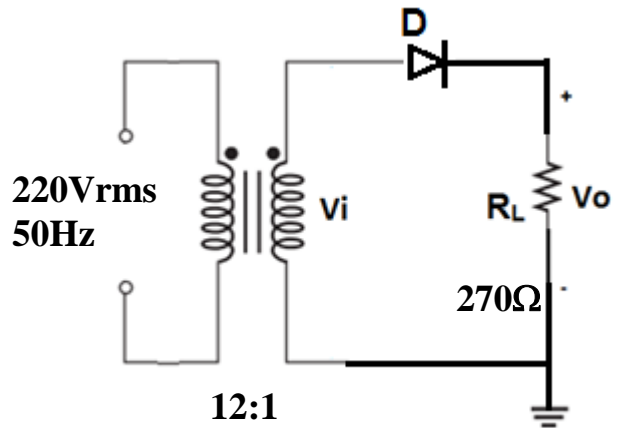
$I_{D(max)} = V_{om} / R_L = 0.096A$ 0.25đ

$PIV = V_{im} = 25.93V$ 0.25đ

Có tụ $V_{ODC} = 25.5V$ 0.5đ

$r\% = 0.97\%$ 0.25đ

$P_o = V_o^2 / R_L = 0.133W$ 0.25đ



Câu 3 (2đ):

a. $I_B = 0.0113mA$ 0.5đ

$I_C = 2.27mA$ 0.25đ

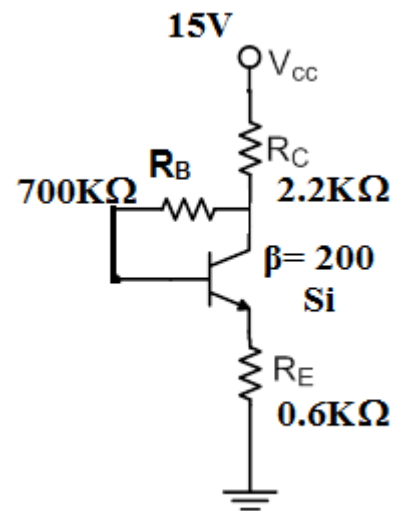
$V_{CE} = 8.64V$ 0.25đ

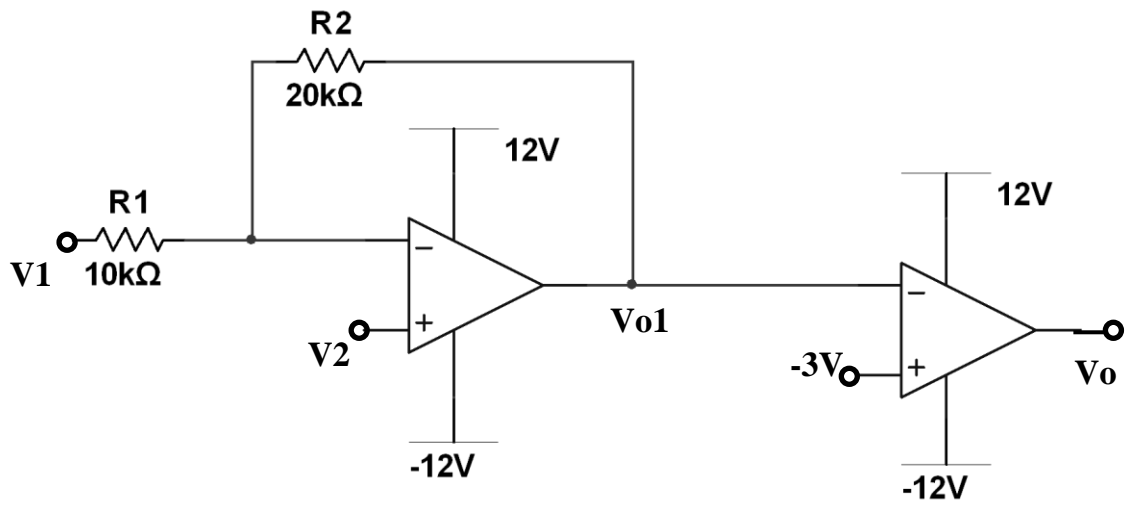
b. $V_E = I_C \times R_E = 1.36V$ 0.25đ

$V_C = V_{CE} + V_E = 10V$ 0.25đ

$V_B = V_E + V_{BE} = 2.06V$ 0.25đ

$P_C = I_C \times V_{CE} = 19.6mW$ 0.25đ

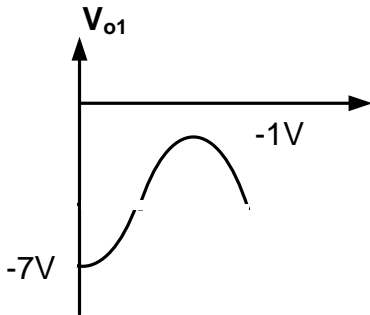




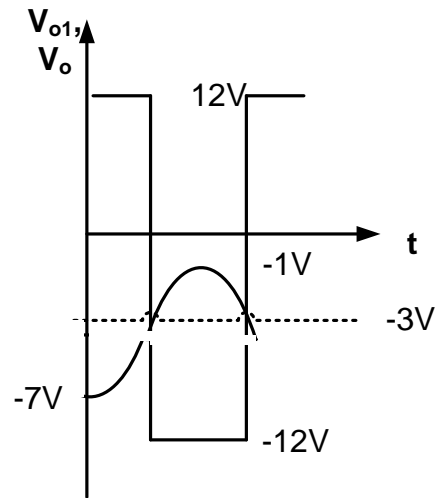
Câu 4 (2đ)

$$V_{o1} = (-R_2/R_1)V_1 + (1 + R_2/R_1)V_2 = -2V_1 + 3V_2 = -4 - 3\cos\omega t \text{ (V)}$$

1đ

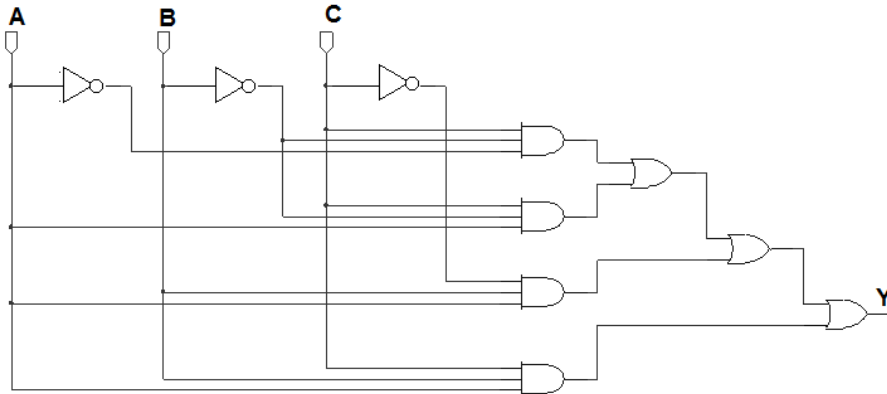


0.5đ



0.5đ

Câu 5 (1.5đ)



$$Y = ABC + A\bar{B}\bar{C} + \bar{A}BC + \bar{A}\bar{B}C = AB + \bar{B}C$$

1đ

A	B	C	Y	A	B	C	Y
0	0	0	0	1	0	0	0
0	0	1	1	1	0	1	1
0	1	0	0	1	1	0	1
0	1	1	0	1	1	1	1

0.5đ