

**2012/10ª Classe / Guia de Correção / Exame de Física / 1ª Época**

Perg.	Resposta	Cotação		
		Parc.	Tot.	
1.	<b>B-divisibilidade</b>	1,0	<u>1,0</u>	
2. a)	<u>Dados</u> $t_i = 1s$ $t_f = 4s$ $V_i = 40m/s$ $V_f = 160 m/s$ $a?$	$a = \frac{\Delta V}{\Delta t} = \frac{160 - 40}{4 - 1} = \frac{120}{3} = 40m/s^2$	(0,5)    (0,3)    (0,2)	1,0
b)	<u>Dados</u> $m = 2 kg$ $a = 40 m/s^2$ $F?$	$F = m.a = 2 \times 40 = 80N$	(0,5)    (0,5)	1,0
c)				1,0
d)	Movimento rectilíneo uniformemente variado (acelerado)	0,5	<u>3,5</u>	
3. a)	<u>Dados</u> $m = 8 kg$ $g = 10 m/s^2$ $P?$	$P = mg = 8 \cdot 10 = 80N$	(0,5)	0,5
b)	<u>Dados</u> $V_{des} = V_{Corpo} = 0,004m^3$ $\rho_l = 10^3 kg/m^3$ $F_l?$	$F_l = \rho_l V_c g = 10^3 \times 0,004 \times 10 = 40N$	(0,5)    (0,5)    (0,5)	1,5
c)	<u>Dados</u> $P = 80N$ $F_l = 40 N$ $P_a?$	$P_a = P - F_l = 80 - 40 = 40N$	(0,5)    (0,5)    (0,5)	1,5 <u>3,5</u>

Perg.	Resposta	Cotação Parc. Tot.
4. a) <u>Dados</u> $R_1 = 10\Omega$ $R_2 = 60\Omega$ $R_3 = 30\Omega$ $R_T?$	$\frac{1}{R_{23}} = \frac{1}{R_2} + \frac{1}{R_3} = \frac{1}{60} + \frac{1}{30} = \frac{1+2}{60} \Rightarrow R_{23} = \frac{60}{3} = 20\Omega$ <p style="text-align: center;"><math>R_T = R_{23} + R_1 = 20 + 10 = 30\Omega</math></p>	<p style="text-align: center;">(0,5)                              (0,2)                              (0,3)</p> <p style="text-align: center;">(0,5)                              (0,2)                              (0,3)</p> <p style="text-align: right;">2,0</p>
b) <u>Dados</u> $R_T = 30\Omega$ $V_T = 90V$ $I_{R_2}?$	$I_T = \frac{V_T}{R_T} = \frac{90}{30} = 3A$  $V_{23} = I_T \cdot R_{23} = 3 \times 20 = 60V$ $I_{R_2} = \frac{V_{23}}{R_2} = \frac{60}{60} = 1A$	<p style="text-align: center;">(0,3)                              (0,2)</p> <p style="text-align: center;">(0,3)                              (0,2)</p> <p style="text-align: right;">1,5</p>
c) <u>Dados</u> $I = 2A$ $R_3 = 30\Omega$ $t = 1 \text{ min} = 60s$ $W?$	$W = V_3 I_3 t = R_3 I^2 t = 60 \cdot 2 \cdot 60 = 30 \cdot 2^2 \cdot 60 = 7200 J$	<p style="text-align: center;">(0,5)                              (0,5)                              (0,5)</p> <p style="text-align: right;">1,5      <b><u>5,0</u></b></p>
5.    A    V                    B    F                    C    V                    D    V                    E    F		<p>5x0,5      <b><u>2,5</u></b></p>
6. <u>Dados</u> $L = 0,10m$ $g = 10m/s^2$ $T?$ $f?$	$T = 2\pi \sqrt{\frac{L}{g}} = 2 \cdot 3,14 \sqrt{\frac{0,1}{10}} = 6,28 \times 0,1 = 0,628s$  $f = \frac{1}{T} = \frac{1}{0,628} = 1,59 Hz$	<p style="text-align: center;">(1,0)                              (0,5)                              (0,5)                              (0,5)</p> <p style="text-align: center;">(0,5)                              (0,5)</p> <p style="text-align: right;">3,5</p>
7. <b>B-</b> massa da esfera pendular.	(1,0)	<p>1,0      <b><u>4,5</u></b></p>