**ĐÁP ÁN TỰ LUẬN**

**Mã 101,103,105,107**

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| **Câu** | **Nội dung** | Điểm |
| **Câu 1(2đ)** | a/ $P=\frac{A}{t}=\frac{9,5.10^{4}}{5.24.60.60}=0,22(W)$ | *1,0* |
| b/ $A=F.s.cosα\rightarrow F=\frac{A}{s}=\frac{9,5.10^{4}}{78000}=1,22(N)$ | *1,0* |
| **Câu 2(2đ)** | a/ $W\_{đ}=\frac{m.v^{2}}{2}=\frac{0,2.4^{2}}{2}=1,6(J)$ $W\_{t}=mgh=0,2.10.1,6=3,2(J)$ $W=W\_{đ}+W\_{t}=4,8 (J)$ | *0,25* *0,25* *0,5* |
| b/ $W=mgh\_{max}\rightarrow h\_{max}=\frac{W}{mg}=2,4(m)$ $W\_{đ}=3W\_{t}\rightarrow W=4.W\_{t}=4mgh\rightarrow h=\frac{W}{4mg}=\frac{4,8}{4.0,2.10}=0,6(m)$ | *0,5**0,5* |

**Mã 102,104,106,108**

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| **Câu** | **Nội dung** | Điểm |
| **Câu 1(2đ)** | a/ $P=\frac{A}{t}=\frac{1,7.10^{6}}{90.24.60.60}=0,22(W)$ | *1,0* |
| b/ $A=F.s.cosα\rightarrow F=\frac{A}{s}=\frac{1,7.10^{6}}{3000000}=0,57(N)$ | *1,0* |
| **Câu 2(2đ)** | a/ $W\_{đ}=\frac{m.v^{2}}{2}=0(J)$ $W\_{t}=mgh=0,1.10.5=5(J)$ $W=W\_{đ}+W\_{t}=5 (J)$ | *0,25* *0,25* *0,5* |
| b/ $W=\frac{m.v^{2}}{2}\rightarrow v=\sqrt{\frac{2W}{m}}$=10 (m/s) $W\_{đ}=2W\_{t}\rightarrow W=3.W\_{t}=3mgh\rightarrow h=\frac{W}{3mg}=\frac{5}{3.0,1.10}=1,67(m)$ | *0,5**0,5* |