

Soluzioni esercizi corporigido 1

- 1) (a) $I=1.875 \text{ Kgm}^2$, $K=0.61 \text{ m}$; (b) $I=0.937 \text{ Kgm}^2$, $K=0.43 \text{ m}$; (c) $I=0.625 \text{ Kgm}^2$, $K=0.35 \text{ m}$; $I(a)=I(c)+M*(2*r)^2$
- 2) (a) $I=0.04 \text{ Kgm}^2$, $K=0.082 \text{ m}$; (b) $I=0.025 \text{ Kgm}^2$, $K=0.065 \text{ m}$; (c) $I=0.02 \text{ Kgm}^2$, $K=0.058 \text{ m}$
- 3) $\omega=1.56 \text{ rad/s}$; $\Delta E_k=24.4 \text{ J}$
- 4) $\alpha=1.33 \text{ rad/s}^2$
- 5) $\tau=4950 \text{ Nm}$; $\Delta E_k=495000 \text{ J}$
- 6) $t=31.2 \text{ s}$; $N_{giri}=435.2$
- 7) $F=3.5 \text{ N}$
- 8) $\alpha=0.44 \text{ rad/s}^2$; $\theta=5.5 \text{ rad}$; $L=0.97 \text{ Kgm}^2/\text{s}$; $E_k=196 \text{ J}$
- 9) $\alpha=3.47 \text{ rad/s}^2$; $L_i=8.37 \text{ Kgm}^2/\text{s}$; $L_f=83.4 \text{ Kgm}^2/\text{s}$
- 10) $\tau a=33.6 \text{ Nm}$; $W=63504 \text{ J}$
- 11) $a=0.21 \text{ m/s}^2$
- 12) $L=63.6 \text{ Kgm}^2/\text{s}$; $E_k=6040.2 \text{ J}$; $\tau=12.8 \text{ Nm}$; $P=2416.2 \text{ W}$
- 13) $E_k(\text{rot})=0.018 \text{ J}$; $E_k(\text{trasl})=0.009 \text{ J}$; $E_k(\text{tot})=0.027 \text{ J}$; $h=0.56 \text{ m}$
- 14) $E_k(\text{rot, in})=13 \text{ J}$; $E_k(\text{rot, fin})=1289 \text{ J}$; $E_k(\text{tot, in})=42 \text{ J}$; $E_k(\text{tot, fin})=4187 \text{ J}$; $E_k(\text{tot, auto, fin})=156156 \text{ J}$
- 15) $E_k=134.5 \text{ J}$; $h=0.76 \text{ m}$