APÊNDICE AO CAPÍTULO 7, (1)

TRANSFORMADAS DE LAPLACE BÁSICAS:	
$f(t)$	$F(s)$
$H(t) = \mathbf{1}(t)$	$1/s$
$e^{-at}.\mathbf{1}(t)$	$1/(s+a)$
$\sin(\omega t).\mathbf{1}(t)$	$\frac{\omega}{s^2+\omega^2}$
$\cos(\omega t).\mathbf{1}(t)$	$\frac{s}{s^2+\omega^2}$
$\delta(t)$	1
$t^n e^{-at}\mathbf{1}(t)$	$\frac{n!}{(s+a)^{n+1}}$
$e^{-at}\sin(\omega_0 t).\mathbf{1}(t)$	$\frac{\omega_0}{(s+a)^2+\omega_0^2}$
$e^{-at}\cos(\omega_0 t).\mathbf{1}(t)$	$\frac{s+a}{(s+a)^2+\omega_0^2}$
$\sin(\omega_0 t+\varphi).\mathbf{1}(t)$	$\frac{s\sin\varphi+\omega_0\cos\varphi}{s^2+\omega_0^2}$
$\cos(\omega_0 t+\varphi).\mathbf{1}(t)$	$\frac{s\cos\varphi-\omega_0\sin\varphi}{s^2+\omega_0^2}$

APÊNDICE AO CAPÍTULO 7

PROPRIEDADES DA TRANSFORMAÇÃO DE LAPLACE:	
Função do tempo:	Transformada:
$f(t)$	$F(s)$
$c_1 f_1(t)+c_2 f_2(t)+ \ldots$	$c_1 F_1(s)+c_2 F_2(s)+ \ldots$
$\dfrac{d^n f(t)}{dt^n}$	$s^n.F(s)-s^{n-1}.f(0\_)-$ $-s^{n-2}.\dot{f}(0\_)-\ldots-f^{(n-1)}(0\_)$
$\int_{-\infty}^{t} f(\tau)d\tau$	$\dfrac{F(s)}{s}+\dfrac{1}{s}.\int_{-\infty}^{0\_} f(\tau)\,d\tau$
$t.f(t)$	$-\dfrac{dF(s)}{ds}$
$e^{-at}.f(t)$	$F(s+a)$
$f(t-a).\mathbf{1}(t-a)$	$e^{-as}.F(s)$
$f(at), \quad a>0$	$\dfrac{1}{a}.F\left(\dfrac{s}{a}\right)$
$f(t), \quad f(t)=f(t+T), T>0$	$\dfrac{1}{1-e^{-sT}}.\int_{0\_}^{T} f(t).e^{-st}.dt$

Nota: $\mathcal{L}^{-1}[F(s)]=f(t), \quad t \geq 0.$

TABLPC2.DOC, LQO, 02/99 – Rev. 2004