2) 3-23 Compute the oscillation frequencies, periods and amplitude after 2 periods (as a fraction of A_0) for the circuit shown for L = 0.01 H, C = 10 μF, and R = 10 Ω.

L =	0.01 H			
C =	10.0 μF	=	0.00001 F	
R =	10.0 Ω			
ω_N =	$\sqrt{(1/CL)}$ =	3162.2777	s^{-1}	
ν_N =	$\omega_N/2\pi$ =	4967.29	Hz	
τ_N =	$1/\nu_N$ =	2.013E-04	s	
β =	R/2L =	500	s^{-1}	
ω_S =	$\sqrt{[(\omega_N)^2 - \beta^2]}$ =	3122.499	s^{-1}	
ν_S =	$\omega_S/2\pi$ =	4904.81		
τ_S =	$1/\nu_S$ =	2.039E-04		
$A(2\tau_S)$ =	$A_0 e^{-2\beta\tau S}$ =	0.815559	A_0	

$x(t) = e^{-500\,t}\,\mathrm{Cos}(3122.5\,t)$