

Continuación Tema 2

$$Y(s) = \frac{1}{3} \left(\frac{1}{s+1} \right) - \frac{1}{3} \left[\frac{s - \frac{1}{2} + \frac{5}{2}}{(s - \frac{1}{2})^2 + \frac{3}{4}} \right]$$

$$Y(s) = \frac{1}{3} \left(\frac{1}{s+1} \right) - \frac{1}{3} \left(\frac{(s - \frac{1}{2})}{(s - \frac{1}{2})^2 + \frac{3}{4}} \right) - \frac{5}{6} \left(\frac{1}{(s - \frac{1}{2})^2 + \frac{3}{4}} \right)$$

$$= \frac{1}{3} \left(\frac{1}{s+1} \right) - \frac{1}{3} \left[\frac{s - \frac{1}{2}}{(s - \frac{1}{2})^2 + \frac{3}{4}} \right] - \frac{5}{6} \left(\frac{\frac{\sqrt{3}}{2}}{(s - \frac{1}{2})^2 + \frac{3}{4}} \right)$$

$$y(t) = \frac{1}{3} e^{-t} - \frac{1}{3} e^{\frac{t}{2}} \cos \frac{\sqrt{3}}{2} t - \frac{5}{3\sqrt{3}} e^{\frac{t}{2}} \sin \frac{\sqrt{3}}{2} t$$