ECE 460 Q2 01/24/01

NAME:
Honor Code

KEY

Find $f(t)$ using the Inverse Laplace Transform.

$$F(\Delta) = \frac{2\Delta + 1}{\Delta^2 + 10\Delta + 26}$$

$$= \frac{2\Delta + 1}{(\Delta+5)^2 + 1^2}$$

$$= \frac{2(\Delta+5) - 9(1)}{(\Delta+5)^2 + 1^2}$$

$$= (2)\frac{(\Delta+5)}{(\Delta+5)^2+1^2} + (-9)\frac{1}{(\Delta+5)^2+1^2}$$

$$f(t) = \left(2e^{-5t}\cos t - 9e^{-5t}\sin t\right)\mu(t)$$