



$$x(t) = e^{-2t} \cdot u(-t+3)$$

$$\begin{aligned} \mathcal{L}\{x(t)\} &= \int_{-\infty}^{\infty} e^{-2t} u(-t+3) \cdot e^{-st} dt \\ &= \int_{-\infty}^3 e^{-2t} \cdot e^{-st} dt \\ &= \int_{-\infty}^3 e^{-t(2+s)} dt = \frac{-1}{(2+s)} e^{-t(2+s)} \Big|_{-\infty}^3 \end{aligned}$$

Para convergência (ROC):

$$\operatorname{Re}\{2+s\} < 0 \Rightarrow \operatorname{Re}\{s\} < -2$$

$$\Rightarrow X(s) = \frac{-1}{(s+2)} \cdot e^{-3(s+2)}$$

$$\therefore X(s) = - \frac{e^{-3(s+2)}}{(s+2)}$$