b) $\ddot{y} - 4y = \dot{u} - 2u$

$s^2 Y(s) - 4 Y(s) = s U(s) - 2 U(s)$

$(s^2 - 4) Y(s) = (s - 2) U(s)$

$$H(s) = \frac{Y(s)}{U(s)} = \frac{(s-2)}{(s-2)(s+2)}$$

$$\boxed{H(s) = \frac{1}{s+2}}$$

$\downarrow \mathcal{L}^{-1}$

$$\boxed{h(t) = e^{-2t}}$$