State assignment (penunjukan peubah keadaan)

masukan : $u(t) \triangleq u$ keluaran $y(t) \triangleq y$

peubah keadaan :: $x_1 \triangleq x(t) \rightarrow \dot{x}_1 = \frac{dx(t)}{dt} = x_2$

$x_2 \triangleq \frac{dx(t)}{dt} \rightarrow \dot{x}_2 = \frac{d^2x(t)}{dt^2} = x_3$

$x_3 \triangleq \frac{d^2x(t)}{dt^2} \rightarrow \dot{x}_3 = \frac{d^3x(t)}{dt^3} = x_4$

$\vdots$

$x_{n-2} \triangleq \frac{d^{n-1}x(t)}{dt^{n-1}} \rightarrow \dot{x}_{n-2} = \frac{d^{n-2}x(t)}{dt^{n-2}} = x_{n-1}$

$x_{n-1} \triangleq \frac{d^n x(t)}{dt^n} \rightarrow \dot{x}_{n-1} = \frac{d^{n-1}x(t)}{dt^{n-1}} = x_n$

$\dot{x}_n = \frac{d^n x(t)}{dt^n} =$ ----?