

Contoh: Tentukan model Ruang Keadaan dengan matrix A Jordan Companion dari model Nisbah Alih.

$$G(s) = \frac{Y(s)}{U(s)} = \frac{10s^5 + 8s^4 + 6s^3 + 4s^2 + 2s + 1}{8s^8 + 7s^6 + 6s^4 + 5s^2 + 4}$$

Jawab:

$$\left. \begin{array}{l} m=5 \\ n=8 \end{array} \right\} m < n$$

$$n=8 \longrightarrow \begin{array}{lll} a_0=4 & a_4=6 & a_8=8 \\ a_1=0 & a_5=0 & \\ a_2=5 & a_6=7 & \\ a_3=0 & a_7=0 & \end{array}$$

$$\begin{array}{l} m=5 \\ \hline b_0=1 \\ b_1=2 \\ b_2=4 \\ b_3=6 \\ b_4=8 \end{array} \quad b_5=10$$

$$\begin{aligned} \dot{x} &= Ax + Bu \\ y &= Cx + Du \end{aligned}$$

$$\Rightarrow D = [\emptyset]$$