Digital control course

Sheet (2)

Inverse Z – Transform

1- Power series method (Long division):

    a. $F(z) = \dfrac{z+1}{z^2-0.2z+0..1}$

    b. $F(z) = \dfrac{10z+5}{(z-1)(z-0.2)}$

    c. $F(z) = \dfrac{1}{z+1}$

    d. $F(z) = 1 + 2z^{-1} + 3z^{-2} + 4z^{-3}$

2- Partial Fraction Method:

    a. $F(z) = \dfrac{z}{(z-1)(z-2)}$

    b. $F(z) = \dfrac{z+1}{z^2-0.3z+0.02}$

    c. $F(z) = \dfrac{(1-e^{-aT})z}{(z-1)(z-e^{-aT})}$

    d. $F(z) = \dfrac{z}{(z+0.1)(z+0.2)(z+0.3)}$

    e. $F(z) = \dfrac{1}{z^2(z-0.5)}$

    f. $F(z) = \dfrac{z+2}{z^2(z-2)}$