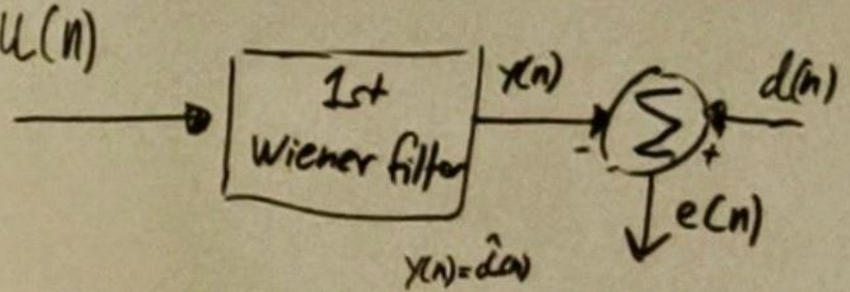
ASP 2.

Autoregressive process by the difference eq: $d(n) = 0.75\,d(n-1) + v(n)$

and noisy process $u(n) = d(n) + w(n) + 0.5\,w(n-1)$

- Draw the block diagram



- Error signal $e(n)$ and cost function to be minimized

$e(n) = d(n) - y(n)$

$= d(n) - \sum_{i=0}^{1} w_i\, u(n-i)$

Cost function:

$J = E[e^2(n)] = E\left[\left(d(n) - \sum_{i=0}^{1} w_i\, u(n-i)\right)^2\right]$

-