**Concept Question 3-13:** Does knowledge of just the poles and zeros completely determine the LCCDE?

$$\mathbf{X}(\mathbf{s}) = \frac{\mathbf{N}(\mathbf{s})}{\mathbf{D}(\mathbf{s})} = \frac{A(\mathbf{s} - \mathbf{z}_1)(\mathbf{s} - \mathbf{z}_2) \ldots (\mathbf{s} - \mathbf{z}_m)}{(\mathbf{s} - \mathbf{p}_1)(\mathbf{s} - \mathbf{p}_2) \ldots (\mathbf{s} - \mathbf{p}_n)}$$

No. The constant *A* above also is needed.