

**Concept Question 12-3:** Is the uniqueness property of the Laplace transform unidirectional or bidirectional? Why is that significant?

▶ A given  $f(t)$  has a unique  $F(s)$ , and vice versa. ◀

The uniqueness property is bidirectional. This is important because it guarantees that when a solution is found in the  $s$  domain, it can be transferred to the time domain and we are assured that it is the only correct solution.