

Unit Step Response: Post-initial Conditions

Quiz: Consider the equation

$$\dot{v} + kv = u(t)$$

with rest initial conditions, $v(0^-) = 0$.

For the solution $v(t)$ what is $\dot{v}(0^+)$?

Choices:

- a) $\dot{v}(0^+) = 0$
- b) $\dot{v}(0^+) = 1/k$
- c) $\dot{v}(0^+) = 1$
- d) $\dot{v}(0^+) = k$
- e) None of these.

Pick what you think is the correct choice and then look at the answer.

MIT OpenCourseWare
<http://ocw.mit.edu>

18.03SC Differential Equations
Fall 2011

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.