

EE351 Homework 6

- 1) Consider a continuous-time LTI system whose step response is given by $s(t) = e^{-t}u(t)$, determine the output of this system to the input $x(t)$ shown in Fig.1.

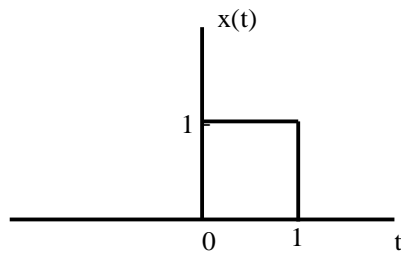


Fig.1

- 2) A system is specified by the equation $(D^2 + 5D + 6)y(t) = (D + 1)x(t)$. Find
- the system function $H(S)$
 - the zero-state response for $t \geq 0$ if $x = e^{-t}u(t)$