Homework 4: due 02/09/18 EE 324: Signals and Systems II

1 Laplace unilateral transform

1. $x(t) = e^{-t+1}u(t)$ 2. $x(t) = e^{-t+1}u(t-1)$ 3. $x(t) = e^{-t+1}\sin(t-1)u(t)$ 4. $x(t) = e^{-t+1}\sin(t-1)u(t-1)$ 5. $x(t) = t^2\sin(\frac{\pi}{3}t)$

2 Transfer functions

Compute the transfer functions of the following systems

- 1. Input: v, output: voltage of C
- 2. Input: v, output: current of R



- 3. Input: v, output: voltage of L
- 4. Input: v, output: voltage of C



- 5. Input: v, output: voltage of R_2
- 6. Input: v, output: voltage of C

