

CARLETON UNIVERSITY

Department of Systems and Computer Engineering

SYSC 5608 Wireless Communications Systems Engineering

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QUIZ 1

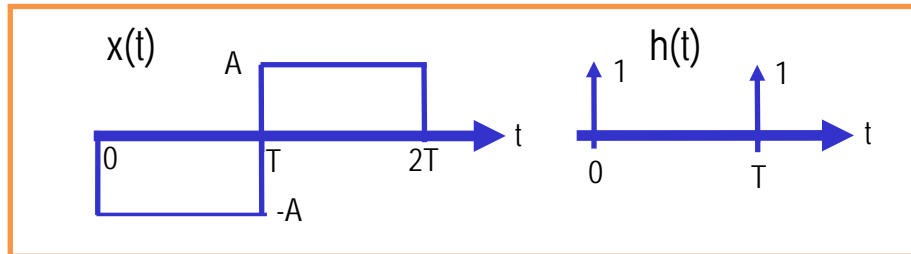
09 January 2020

Name:

Student #:

E-mail:

Q1. Convolution: $y(t) = x(t) * h(t)$. Sketch $y(t)$.



Q2. X is a random variable with mean μ_X and standard deviation σ_X . Let $Y = \alpha X$, where α is a constant.

- Find μ_Y in terms of μ_X and α .
- Find σ_Y in terms of σ_X and α .

Q3. X is Gaussian random variable with mean μ (assume $\mu > 0$) and standard deviation σ .

- Write $f_X(x)$, the PDF expression for X .
- Sketch the PDF of X .
- Sketch the CDF of X .