4 Assignment 3 — Continuous-Time LTI Systems

Before starting work on this assignment, it is **critically important** that the student carefully read Section 1 (titled "General Information"), which starts on page 1 of this document.

4.1 Part A

Regular Problems

◇ 4.1 e f **[compute convolution]**
◇ 4.3 b g **[compute convolution]**
◇ 4.5 **[manipulation of expressions involving convolution]**
◇ 4.6 a **[convolution property proof]**
◇ 4.9 **[meaning of LTI]**

MATLAB Problems

◇ D.5 **[plot, abs, angle, complex numbers]**

4.2 Part B

Regular Problems

◇ 4.11 a b c **[find impulse response]**
◇ 4.12 a b **[impulse response and series/parallel interconnection]**
◇ 4.13 b c **[convolution, impulse response, system interconnection]**
◇ 4.14 a f g **[causality, memory]**
◇ 4.15 a b **[BIBO stability]**
◇ 4.16 **[inverse system]**
◇ 4.17 a **[system function, eigenfunction]**

MATLAB Problems

◇ D.8 a b **[graphic patterns]**