3 Assignment 2 — Preliminaries and Continuous-Time Signals and 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.

3.1 Part A

Regular Problems

- ◇ 2.1 a b c d **[notation]**
- ◇ 2.2 a b c d e f g h i **[notation]**
- ◇ 3.1 f **[time/amplitude transformations]**
- ◇ 3.2 a **[time tranformations]** [Note: In Edition 5.0 of the textbook, there is only one part to Exercise 3.2, which is unlabelled in the textbook but is referred to as part (a) on this handout.]
- ◇ 3.4 a b c d **[time/amplitude transformations]**
- ◇ 3.6 e f g **[periodicity]**
- ◇ 3.9 c d **[even/odd symmetry]**
- ◇ 3.10 b **[symmetry and sums/products]**
- ◇ 3.17 b c **[signal properties, even/odd decomposition]**
- ◇ 3.20 a b c f **[properties of delta function]**

MATLAB Problems

- ◇ D.1 a b c d e **[MATLAB identifiers]**
- ◇ D.2 a b c d **[MATLAB expressions]**

3.2 Part B

Regular Problems

- ◇ 3.22 c **[representations using unit-step function]**
- ◇ 3.24 d g **[memoryless]**
- ◇ 3.25 b f **[causal]**
- ◇ 3.26 b e **[invertible]**
- ◇ 3.27 d e **[BIBO stable]**
- ◇ 3.28 b d **[time invariant]**
- ◇ 3.29 b e **[linear]**
- ◇ 3.33 b **[eigenfunctions]**

MATLAB Problems

- ◇ D.3 **[temperature conversion, looping]**
- ◇ D.4 a b c **[write unit-step function]**