

NOTE: It is my policy to give a failing grade in the course to any student who either gives or receives aid on any exam or quiz.

INSTRUCTIONS: Answer all questions in your examination booklet, *in sequence, please*. Unless otherwise indicated, all questions count equally.

1. Explain the need for “switch debouncing,” and give an algorithm that will solve the problem.
2. Explain how to use the Waveform Analyzer to verify that a program generates a sequence of pulses correctly.
3. Explain how to use an oscilloscope to verify that a program generates a sequence of pulses correctly.
4. What is the relationship between a *header file*, a *macro proc*, and a *library*? Use the `delayProcs` project as an example.
5. How can a program detect when and where a user presses the touchscreen on the RC200?
6. Define *sampling rate* and *bits per sample*, and tell how these two terms apply to generating audio tones. Include an explanation of how sine calculations are managed in Handel-C.