**What is hysteresis and how does it help prevent bad behavior on digital inputs?**
Hysteresis changes the threshold depending on the current digital state. It helps prevent bad behavior by increasing the tolerance of noise because the threshold is farther away.

**What is quantization?**
Quantization is the process of mapping a high-resolution signal to a lower-resolution one. We do this by taking an analog signal (infinite resolution) to a digital signal (finite resolution & depends on # of bits of resolution).

**What does Nyquist theory explain? What is the problem with sampling a signal too slowly?**
The Nyquist theory explains the relationship between how often you sample an input signal and whether or not you'll be able to tell what it is afterwards. If you sample the signal too slowly you can miss important changes in the signal which means your reading will be a very poor representation of the original signal.

**The maximum resolution of the ADC is 12-bits. How many quantization steps/values does this give us?**
A 12 bit ADC gives us 4096 quantization values.

**What are the steps to perform an ADC calibration?**
You need to first enable the ADC in the RCC. You then set the calibration bit. It will start the calibration and you wait for the calibration bit to be cleared. Once it is cleared the ADC has been calibrated.

**What's the difference between right and left-aligned data in the DAC registers?**
Right aligned mode will take a 16 bit number and take 12 bits starting from the right. While left aligned will take the 12 bits starting from the left. This is useful as when you use left aligned you lose some precision of the lower bits but keep the more significant bits without having to shift bits.

**What DAC register would you use to write 8-bit right-aligned data? (use the peripheral reference manual)**
DAC channel1 8-bit right-aligned data holding register: (DAC_DHR8R1)
DAC channel2 8-bit right-aligned data holding register: (DAC_DHR8R2)

**Name something you found confusing or unclear in the lab manual. If everything was clear, simply answer that you didn't have any issues.**
I felt that everything was clear in the lab manual.