1. **What does the AUTOEND bit in the CR2 register do? Why don't you want to use it when you'll be needing a restart condition?**
   When set, the peripheral will automatically generate a stop condition at the end of a transaction. This setting is undesirable when performing chained writes and reads—which is necessary in the lab assignment.
2. **This lab used standard-mode 100 kHz I2C speed. What values would you write in the TIMINGR if we were using 400 kHz fast-mode?**

```
I2C2->TIMINGR = (0x0 << 28);
I2C2->TIMINGR = (0x9 << 0);
I2C2->TIMINGR = (0x3 << 8);
I2C2->TIMINGR = (0x1 << 16);
I2C2->TIMINGR = (0x3 << 20);
```

3. **This lab used blocking code. To implement it completely as non-blocking you would replace all of the wait loops with interrupts. Most flags in the I2C peripheral can trigger an interrupt if the proper enable bit is set. Find the interrupt enable bits that match the following flags:**
   - **TC**: bit 6 – set to 1
   - **NACKF:** bit 4 – set to 1
   - **TXIS (transmit interrupt):** bit 1 – set to 1
   - **ARLO:** Bit 9 – set to 1, and then an interrupt is generated if the ERRIE bit is set in the I2C_CR1 register.
4. **The gyro can operate in three full-scale/measurement ranges, measured in degrees-per-second (dps). What are these three ranges?**
   The L3GD20 is a three-axis digital-output device, which returns positive values for counter-clockwise rotation, negative for clockwise, and near zero when not in motion
5. **What is the I2C address of the gyro when the SDO pin is low? The lab has the pin set high, read the I2C section of the gyro datasheet.**
   Otherwise, if the SDO pin is connected to ground, the LSb value is '0' (address 1101010b)