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?

The Autoend controls if the Automatic end is enabled or not. It is not advisable to use in restart condition as it will send a stop signal when NBYTES are transferred even if we wish to restartcondition.

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?

PRESC - 0; SCLL - 0x9; SCLH - 0x3, SDADEL - 0x1; SCLDEL - 0x3

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: The Inter-Integrated Circuit (I2C) Interface 17

TXIS-CR1-BIT 1; ARLO-CR1-BIT 7; NACKF-CR1-BIT 4; TC-CR1-BIT6

4. The gyro can operate in three full-scale/measurement ranges, measured in degrees-per-second (dps). What are these three ranges?

245/500/2000 dps

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.

SDO pin at low = 0x68