

1. Describe two differences between I²C master and slave devices?
A slave cannot start a transaction on its own.
The master initiates a transaction with a slave by sending the address of the
2. What are the two connections in an I²C bus? Describe their purpose.
Serial Data (SDA) – for when the master device uses clock transitions.
Serial Clock (SCL) – allows for both the master and the slave to produce data, depending on the direction of the communication.
3. What is the difference between open-drain and push-pull outputs?
Push-pull – depends on the voltage of external system.
Open-drain – contains a single transistor, can only pull to a low state. Requires an external connection to return a line to a high state.
4. What is the purpose of the I²C restart condition?
To allow a master to continue with a new transaction without having to stop and risk the chance of having other devices take control.
5. What peripheral register would you use to set the read/write direction of the next I²C transaction?
CR2 Register
6. The 10-bit SADD bit-field holds the slave device address. Since standard I²C addresses only use 7 bits, to which bits in the bit-field would you write the shorter address?
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7. Name one thing you found confusing or unclear in the lab.
How to successfully bitmask an address without losing the data.