

**Test Questions:**

1. Draw a schematic of temperature sensor interfaced with an I2C port of MSP430 (with least specifications) microcontroller.
2. Design a PCB (2 layer) to optimally place and fabricate the sensor with associated components in Q1. Note, the temperature sensor must be placed on the PCB bottom layer, and other components must not have higher height than temperature sensors on that layer.
3. Write a C program for the microcontroller on your designed board (Q2) to perform sampling of temperature every second, and transfer the data through the I2C port.

*Email your solutions by Thursday night (17<sup>th</sup> April, 2014) to [bmorshed@memphis.edu](mailto:bmorshed@memphis.edu).*