



Department of Electrical and Computing Engineering

UNIVERSITY OF CONNECTICUT

**ECE 3411 Microprocessor Application Lab: Fall 2015**

## **Question XIV**

There are 4 question in this quiz. There are 2 pages in this quiz booklet. Answer each question according to the instructions given.

You have **5 minutes** to answer the questions.

If you find a question ambiguous, be sure to write down any assumptions you make.

**Be neat and legible.** If we can't understand your answer, we can't give you credit!

**Write your name in the space below.** Write your initials at the bottom of each page.

**THIS IS A CLOSED BOOK, CLOSED NOTES QUIZ.  
PLEASE TURN YOUR NETWORK DEVICES OFF.**

Any form of communication with other students is considered cheating and will merit an F as final grade in the course.

*Do not write in the box below*

<b>Total (xx/10)</b>

**Name:**

**Student ID:**

1. Encircle the correct answer. SPI and  $I^2C$  protocols are:
  - (a) Asynchronous
  - (b) Synchronous
  - (c) None of the above
  
2. Encircle the correct statement about SPI and  $I^2C$  protocols:
  - (a) SPI is half duplex whereas  $I^2C$  is full duplex.
  - (b) SPI is full duplex whereas  $I^2C$  is half duplex.
  - (c) Both SPI and  $I^2C$  are full duplex.
  - (d) Both SPI and  $I^2C$  are half duplex.
  
3. Suppose a SPI Slave wants to send 2 bytes of data to a SPI Master. Select the correct statement from the following:
  - (a) Slave initiates SPI communication by itself and sends 2 bytes of data.
  - (b) Slave asks the Master to initiate SPI communication and then sends 2 bytes of data to Master.
  - (c) Master initiates SPI communication by itself and sends 2 bytes of data to Slave.
  - (d) None of the above
  
4. Which one is correct for transferring a data byte from an  $I^2C$  Master to Slave:
  - (a) Master sends Address, Slave ACKs, Master sends Data, Slave ACKs.
  - (b) Slave sends Address, Master ACKs, Master sends Data, Slave ACKs.
  - (c) Slave requests Address, Slave ACKs, Master sends Data, Master ACKs.
  - (d) None of the above

### End of Question

Please double check that you wrote your name on the front of the question.

**Initials:**