Module Name: Microprocessor Systems Laboratory

Module Code: ELCE333

Laboratory Experiment No. 5

Pre-Lab Report

Experiment Title:

Serial Communication Interface

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1. **What is meant by Baud Rate and in what unit is it measured?**

   In data communication and electronics, the baud rate is the rate at which information is transferred in a communication channel. In other words, it is the number of symbols transferred per second. Each symbol can handle more than two states, meaning it may illustrate more than one binary bit and each binary bit always represents two states (0 and 1). The baud rate is measured in bit per second (bit/sec).

2. **Which jumper has to be moved in order for SCI1 to function?**

   Port 5

3. **The HCS12 TxD and RxD signals _____ (are, are not) TTL-compatible.**

   Are

4. **In this lab, what is the role of the MAX233 (MAX232) chip?**

   The MAX232 has two sets of line drivers for transferring and receiving data. The line drivers used for TXD are called T1 and T2, while the line drivers for RXD are designed as R1 and R2. In many applications only one is used.

5. **What is the role of TDRE and RDRF? State to which register they belong to.**

   TDRE stands for Transmit Data Register Empty flag. It is responsible for writing new value data to SCI data register after the read from SCI status1 register.

   RDRF stands for Receiver Data Register Full flag. It becomes a set when a character has been received and is waiting to be read from the SCI data register.