

**Khalifa University of Science, Technology and Research**

**Electronics Engineering Department**

**Module Name: Microprocessor Systems Laboratory**

**Module Code: ELCE332**

**Pre-Laboratory Experiment No. 5**

**Serial Communication Interface**

**Laboratory Partners**

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**Pre- laboratory questions:**

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

Baud rate is the number of symbol changes (waveform changes or signaling events) made to the transmission medium per second using a digitally modulated signal or a line code. The symbol rate is measured in baud (Bd) or symbols/second.

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

Jumpers J23 and J29.

1. **The HCS12 TxD and RxD signals \_\_\_\_**are**\_\_\_ (are, are not) TTL-compatible.**
2. **In this lab, what is the role of the MAX233 (MAX232) chip?**

The MAX233 or MAX232 act as level convertors (shifters). MAX233 is a connector chip used for asynchronous serial interface and its role is to make the voltage level operative for the next connected device, it is usually used in the PC and the microcontroller interface.

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

TDRE & RDRF are flags that demonstrate that the data has been either transmitted or received. They belong to SCnSR1 (SCIn Status Register).