

# ECE3073 Computer Systems

## Practice Questions

### Computer Interfaces

i) Describe in detail the voltage level changes that would be observed on an RS232 line carrying asynchronous serial data when one character is transmitted.

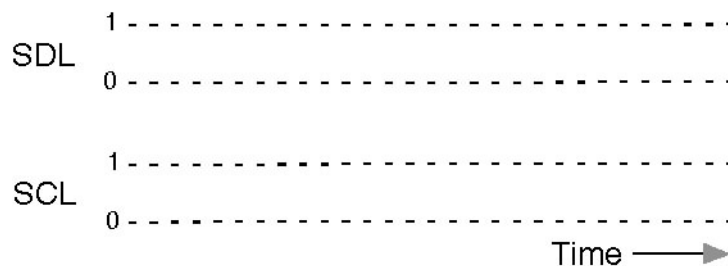
ii) For an asynchronous serial communications link carrying data from a UART set up as follows: 8-bit data with parity and 1 and 1/2 stop bits what is the maximum permissible percentage error between transmit and receive clocks? Clearly explain how you arrived at your answer.

iii) In terms of asynchronous serial communications explain the meaning of the following terms:

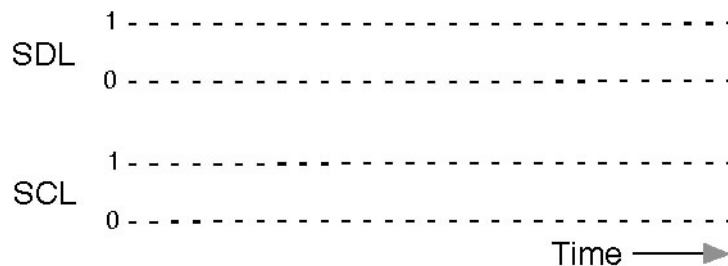
- a) parity error,
- b) framing error,
- c) overrun error, and
- d) baud rate.

iv) For an I<sup>2</sup>C bus system complete the following timing diagrams to show how start, stop, a '1' data bit and a '0' data bit are transmitted:

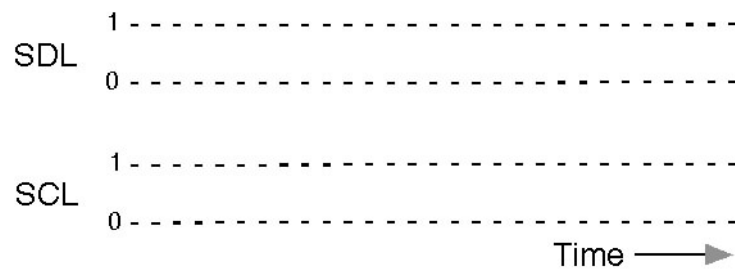
START



STOP



DATA '0'



DATA '1'



RAR 23/03/2012