

**Department of Computer System Engineering**

**COMPUTER DESIGN LAB**

**ENCS 411**

**PRELAB 3**

**Experiment No. 6**

***Serial Data Communication Using RS-232***

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**Section: 3**

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* **From Figure 3 how can you explain why the address of COM1 is 3F8h?**

**From Figure 3**, we found that the $\overbar{CS}$ is connected to NAND gate which has

(A9 A8 A7 A6 A5 A4 A3 AEN) as inputs, and $\overbar{CS}$ is active low and so A9 … A3 will take the value of logic 1, COM1 is located at output zero using (A2 A1 A0), as a result:

COM1 has:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A9 | A8 | A7 | A6 | A5 | A4 | A3 | A2 | A1 | A0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |

Which equals 3F8H.

* **What are the values of 3F8 and 3F9 registers, when programming the UART to operate using baud rate to be 4800bps?**

Baud rate =1.8432M/ (16\*count)

4800 bps = 1.8432M / (16\*count)

Count = 1.8432M / (16 \* 4800) = 24

(24)10 = 00011000 ---> 18H

And so, we will send 18 (least significant) on 3F8 and 00 (most significant) 3F9.