# **Lab-6**

**Serialization of data and BCD and ASCII conversion in PIC**

**Objective:**

In this lab students will learn

* How to implement of serialization of data in PIC using rotate instructions.
* How to perform conversion between BCD and ASCII?

**Theory**

There are four types of rotate instructions in PIC microcontroller that are: RRCF, RRNCF, RLCF, RLNCF. This will allow the contents of file registers to rotate right or left. Two types of rotations are possible: first is without carry and the second is through carry flag of status register. Each of these instructions is shown below:

**RRNCF**



**RLNCF**



**RRCF**



**RLCF**



**Lab Exercise**

**Run all questions on MPLAB and show the contents of the relevant registers.**

Find the contents of WREG register after each of the following are executed. [4]





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Write a program to find the number of zeros in a byte of data. [4]

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**Conclusion [2]**

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