Total Marks:35	
ROLL NO	

## Lab-4 I/O port programming of PIC microcontroller using assembly language

## **Objective:**

In this lab students will learn

- How to read datasheet of PIC18F4550?
- How to configure pins of PIC as Input/output?
- How to address bits individually?
- Creating square waves of different duty cycles.

## **Theory**

Three types of registers are available in PIC microcontroller that are used for programming the ports. These are PORTx, TRISx, LATx. PORTx refers to any specific port. It can be A,B,C,D, and E. TRISx decides either we want to configure a particular port as input or output port. If we clear the contents of TRISx register, then the port acts as output port. If the contents of TRIS are set, then it will act as an input port. Upon reset all the ports act input ports. All ports do not have same number of pins. For example, PORTA has 7 pins. While PORTB, PORTC, PORTD are of 8 pins. PORTE has only 3 pins in 18 series microcontroller.

## Lab Exercise

Write down a program for toggling all the pins of PORTB continuously three different approaches to do the task.	[5]

	esults on PROT	EUS.					[5+5]
		square wave o	of 50% and	75% duty c	ycle. Show t	the simul	ations of
		square wave (	of 50% and	75% duty c	ycle. Show t	the simul	
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		square wave o	of 50% and	75% duty c	ycle. Show t	the simul	
Write a program		square wave o	of 50% and	75% duty c	ycle. Show t	the simul	
		square wave o	of 50% and	75% duty c	ycle. Show t	the simul	

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Write a program to monitor the RB5 pin RB3.	n. When it is high, make a low-to-high-to-low pulse on [5]
	<del></del>
Conclusion	[5]