



# SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

AN AUTONOMOUS INSTITUTION

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



**Class : III EEE / 05 SEM**

**Subject Name : 19EE503-Microprocessor and Microcontroller**

**Subject Topic : Timers of PIC16F877**

**Objective : To analyse the Timers of PIC16F877**

**Puzzle 1:**

Clue: I am an 8-bit timer that can operate as a counter and have a prescaler to divide the input clock frequency. Which timer am I?

Answer: Timer0

**Puzzle 2:**

Clue: I can work in both 8-bit and 16-bit modes, and I have two registers associated with me: TMR1H and TMR1L. What timer am I?

Answer: Timer1

**Puzzle 3:**

Clue: I am a 16-bit timer with a unique ability to function as an event counter. I can also generate an interrupt when my register overflows. What timer am I?

Answer: Timer1

**Puzzle 4:**

Clue: I am an 8-bit timer that can be used to generate PWM signals in conjunction with the CCP module. Which timer do I represent?

Answer: Timer2

**Puzzle 5:**

Clue: I can be used with a prescaler and postscaler, making me versatile in timing applications, especially in PWM generation. What timer am I?

Answer: Timer2

**Puzzle 6:**

Clue: I am often used in real-time clock applications because of my ability to use an external crystal oscillator. Which timer am I?

Answer: Timer1

**Puzzle 7:**

Clue: I am the smallest and simplest timer, often used for basic time delays in software loops. Which timer do I represent?

Answer: Timer0

**Puzzle 8:**

Clue: I have a postscaler feature that allows me to generate interrupts after a specific number of timer overflows. Which timer am I?

Answer: Timer2

**Puzzle 9:**

Clue: I can count external pulses when connected to an external pin, making me useful in frequency measurement applications. Which timer am I?

Answer: Timer1

**Puzzle 10:**

Clue: I can be configured to generate an interrupt when my TMR0 register overflows from 0xFF to 0x00. Which timer am I?

Answer: Timer0