Subject: Embedded System **Total Time: 2 Hr.**

Subject Code: CP23504T **Total Marks: 50 Marks**

PART B

1.0 ANSWER ANY EIGHT OF THE FOLLOWING 2*8=16

1.1 Name the type of processor used for embedded system development.

1.2 Draw the synergy diagram of embedded system.

1.3 Name the component used to reduce the power consumption in embedded system.

1.4 State the specification of memory available in PIC16F877A.

1.5 State the main functions of program counter.

1.6 Draw the parallel slave port connection diagram

1.7 Classify instruction sets based on the type of operation of PIC microcontroller.

1.8 Define the term "Interrupt Service Routine".

1.9 How many timer modules does PIC16F877A has?

1.10 How many CCP modules does PIC16F877A have?

2.0 ANSWER ANY SIX OF THE FOLLOWING 3*6=18

2.1 Write the applications of embedded system in various field

2.2 Draw the layered architecture of embedded system.

2.3 What is the role of USART in PIC Microcontroller?

2.4 How does a watch dog timer works?

2.5 Write the specification of the on chip memory available in PIC16F877A.

2.6 Write a short note on Port A & TRIS A.

2.7 Differentiate between capture, compare & PWM mode of PIC microcontroller.

2.8 How bank is selected in PIC Microcontroller?

3.0 ANSWER ANY FOUR OF THE FOLLOWING 4*4=16

3.1 Differentiate between direct & indirect addressing modes

3.2 Draw & briefly explain about the architecture of PIC16f877A.

3.3 Differentiate between SPI & I^{2}C

3.4 Write a short note on STATUS register.

3.5 Write a program for Led Blinking in C.

3.6 Draw the block diagram of PWM module.