Day : Monday   Time : 02:30 PM-05:30 PM

Date : 19-12-2022   **W-13346-2022**   Max. Marks : 60

N.B.:

1)	All questions are **COMPUSLORY**.
2)	Figures to the right indicate **FULL** marks.
3)	Assume suitable data **WHEREVER** necessary.
4)	Use of **NON-PROGRAMMABLE** calculator is allowed.

Q.1 **a)** Draw pin diagram of PIC 18F458 microcontroller. **(05)**
b) Explain program counters of PIC18F458 microcontroller. **(05)**

OR

a) Draw Architecture of PIC18F458 microcontroller. **(05)**
b) Explain EEPROM of PIC18F458 microcontroller. **(05)**

Q.2 **a)** What are different addressing modes for PIC18 microcontroller? **(05)**
b) Explain bit operations for PIC18 microcontroller. **(05)**

OR

a) Explain any 5 instructions from PIC18 instruction set. **(05)**
b) What is header file and source file in PIC18 microcontroller? **(05)**

Q.3 **a)** What is simulators and emulators? **(05)**
b) Explain different interrupts in PIC18 microcontroller. **(05)**

OR

a) Explain assemblers and compliers. **(05)**
b) What are different timers used in PIC18 microcontroller. **(05)**

Q.4 **a)** Explain serial port programming in PIC18. **(05)**
b) Explain interfacing of keypad (4X4) with PIC18. **(05)**

OR

a) What is SPI protocol in PIC18 microcontroller? **(05)**
b) Explain interfacing of LCD (16X2) with PIC18. **(05)**

Q.5 **a)** Explain PWM mode with interrupt in PIC18. **(05)**
b) Explain interfacing of stepper motor with PIC18. **(05)**

OR

a) Explain capture, compare mode in PIC18. **(05)**
b) Explain speed control of DC motor with PIC18. **(05)**

Q.6 **a)** Explain ADC interfacing with PIC18. **(05)**
b) How to measure and temperature using PIC18? **(05)**

OR

a) Explain DAC interfacing with PIC18. **(05)**
b) How to measure voltage by using PIC18? **(05)**

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