

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VII ELECTRICAL : : SUMMER - 2022
SUBJECT : ADVANCED MICROCONTROLLER

Day : Thursday
Date : 2/6/2022

S-13346-2022

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N. B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.
- 4) Assume suitable data, if necessary.

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- Q. 1** a) Explain EEPROM of PIC18F458 microcontroller. (05)
b) Draw block diagram of PIC18F458 microcontroller. (05)

OR

- a) Explain program counter of PIC18F458 microcontroller. (05)
b) Draw pin diagram of PIC18F458 microcontroller. (05)

- Q. 2** a) What are different data types in PIC programming? (05)
b) What are control loops in PIC programming? (05)

OR

- a) What are different addressing modes in PIC18F458 microcontroller? (05)
b) Write any five instructions of PIC18F458 microcontroller. (05)

- Q. 3** a) What is simulator and emulator? (05)
b) What are different advantages MPLAB Integrated Development Environment (IDE)? (05)

OR

- a) Explain function of any one timer in detail. (05)
b) Explain any one I/O ports in detail. (05)

- Q. 4** a) Explain interfacing of PIC18F458 with LCD. (05)
b) Write in brief about SPI protocol. (05)

OR

- a) What is serial port programming? (05)
b) Explain interfacing of PIC18F458 with LED. (05)

- Q. 5** a) Explain PWM mode with interrupt. (05)
b) Explain interfacing of DC motor with PIC18F458. (05)

OR

- a) Explain PWM mode without interrupt. (05)
b) Explain interfacing of stepper motor with PIC18F458. (05)

- Q. 6** a) How to measure "flow" by using PIC18F458? (05)
b) Explain interfacing of DAC with PIC18F458. (05)

OR

- a) How to measure "pressure" by using PIC18F458? (05)
b) Explain interfacing of ADC with PIC18F458. (05)

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