

B.Tech. SEM -VII Electrical 2014 Course (CBCS) : SUMMER - 2019
SUBJECT-ADVANCED MICROCONTROLLER

Day: Wednesday
Date: 15/05/2019

S-2019-2818

Time: 02.30 PM TO 05.30 PM
Max. Marks: 60

N.B.:

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

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- Q.1** a) Explain special function register of PIC 18F458 microcontroller. (05)
b) Draw block diagram of PIC 18F458 microcontroller. (05)
OR
Q.1 a) Write a note on EEPROM. (05)
b) Explain following pins of PIC 18F458 microcontroller. (05)
i) \overline{EA} ii) \overline{PSEN} iii) ALE
- Q.2** a) Explain data structure of PIC 18F458 microcontroller. (05)
b) Write a note on control loops. (05)
OR
Q.2 a) Explain any five instructions of PIC 18F458 microcontroller. (05)
b) Explain data types of PIC 18F458 microcontroller. (05)
- Q.3** a) Explain Simulators & Emulators. (05)
b) Explain I/O ports of PIC 18F458 microcontroller. (05)
OR
Q.3 a) Explain MPLAB integrated development environment (IDE). (05)
b) Explain compilers & linkers. (05)
- Q.4** a) Explain interfacing of PIC 18F458 with keypad (4x4). (05)
b) Write a note on SPI protocol. (05)
OR
Q.4 a) Explain interfacing of PIC 18F458 with LED. (05)
b) Explain interfacing of PIC 18 F458 with LCD (16x2). (05)
- Q.5** a) Explain compare mode without interrupt of PIC 18F458 microcontroller. (05)
b) Explain speed control of DC motor with PIC18F458 microcontroller. (05)
OR
Q.5 a) Explain capture mode without interrupt of PIC 18F458 microcontroller. (05)
b) Explain interfacing of Stepper motor with PIC 18F458microcontroller. (05)
- Q.6** a) Explain measurement of current with PIC18F458 microcontroller. (05)
b) Explain interfacing of DAC with PIC18F458 microcontroller. (05)
OR
Q.6 a) Explain interfacing of ADC with PIC18F458 microcontroller. (05)
b) Explain measurement of pressure with PIC18F458 microcontroller. (05)