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.

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. i) $\overline{EA}$ ii) $\overline{PSEN}$ iii) ALE	**(05)**
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)**

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