

## **SECTION-D**

No. of Printed Pages : 4

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**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Draw and explain the architecture of Embedded System. (CO1)

Q.24 Draw and explain the pin configuration of PIC18F458. (CO2)

Q.25 Explain the C interfacing diagram of ADC with PIC18 $\mu$ C. (CO5)

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## **6th Sem./Automation & Robotics**

### **Subject :Embedded Systems**

Time : 3 Hrs.

M.M. : 60

## **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 How many memory cells are present in 1kb RAM? (CO1)

- a) 1024
- b) 8192
- c) 512
- d) 2048

Q.2 Embedded systems are: (CO1)

- a) General purpose
- b) Special purpose
- c) Both (a) and (b)
- d) None of these

Q.3 Which of the following speed up the testing process? (CO2)

- a) Kernel
- b) Software
- c) Application manager
- d) Program debugging tool

Q.4 There are total of \_\_\_\_\_ ports in the PIC18F458.(CO2)

- a) 4
- b) 3
- c) 5
- d) 6

(1)

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Q.5 Which instruction is used to clear bit? (CO3)

- a) BSF
- b) BCF
- c) BTFSS
- d) BTFSC

Q.6 What is the correct instruction written in C language which will start Timer3? (CO3)

- a) T3CONbits.TMR3ON=1;
- b) T3CONBITS.TMR3ON=1;
- c) T3CONbits.tmr3on=1;
- d) t3conbits.tmr3on=1;

### SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define embedded system. (CO1)

Q.8 ExpandRTOS. (CO1)

Q.9 Define cross compiler. (CO2)

Q.10 ExpandADC. (CO3)

Q.11 What is the primary purpose of sensor interfacing? (CO4)

Q.12 Define data serialization. (CO3)

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Write the characteristics of an embedded system. (CO1)

Q.14 Compare CISC and RISC. (CO1)

Q.15 Write the PIC18 configuration registers. (CO2)

Q.16 Write the basic features of PIC18F458. (CO2)

Q.17 List the features of PIC μC 1/0 ports. (CO3)

Q.18 Write short note on PIC18 serial port programming in C (CO2)

Q.19 Explain the CCP module of PIC μC. (CO2)

Q.20 Write the advantages and disadvantages of PIC μC. (CO3)

Q.21 Write a C program for ROM allocation in PIC18 (CO3)

Q.22 Explain DC motor interfacing with PIC18? (CO5)