

SECTION-D

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

- Q.23 Explain embedded system architecture in detail with neat diagram.
- Q.24 Explain how to program a PIC microcontroller using C to read data from an analog-to-digital converter and digital-to-analog converter.
- Q.25 Write short note on :
- Optoisolator.
 - Interrupts in PIC

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221064A

6th Sem / ECE, ECE (For Speech and Hearing Impaired)

Subject : Embedded Systems

Time : 3 Hrs.

M.M. : 60

SECTION-A

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

- Q.1 The Harvard architecture of PIC microcontrollers has
- two separate sets of address and data bus
 - separate data and code memory
 - faster execution
 - all of these
- Q.2 Embedded systems are generally
- microcontroller based
 - microprocessor based
 - peripheral based
 - none of these

- Q.3 How is the protection and security for an embedded system made?
- a) Memory disk security
 - b) OTP
 - c) Security chip
 - d) IPR

- Q.4 How many bytes of bit addressable memory is present in PIC based microcontrollers?
- a) 128 bytes b) 16 bytes
 - c) 32 bytes d) 8 bytes

- Q.5 The default type of data 'char' is
- a) signed b) unsigned
 - c) both a and b d) none

- Q.6 The time delay in PIC18 series can be obtained by
- a) hardware b) program
 - c) both a and b d) none

SECTION-B

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

- Q.7 Define PIC.

(2)

221064A

- Q.8 Expand SFR.
- Q.9 Name any two PIC18 series microcontroller.
- Q.10 What is pipelining?
- Q.11 Name two portions used in Data RAM allocation?
- Q.12 Expand EPROM.

SECTION-C

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

- Q.13 Write the components of an embedded system.
- Q.14 Explain I/O ports of PIC18F458.
- Q.15 Explain Relay.
- Q.16 Name the logic operators in Cprogramming of PIC.
- Q.17 Name the data types used in Cprogramming of PIC.
- Q.18 Name and give function of PIC registers.
- Q.19 Draw pin diagram of PIC18F458.
- Q.20 Write any four differences between RAM and ROM.
- Q.21 Explain how to obtain time delays in C. Write a program illustrating time delay.
- Q.22 Explain the process of interfacing a PIC 18 microcontroller with a stepper motor.

(3)

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