No. of Printed Pages : 4 181062C/171062C
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6th Sem / Eltx.
Subject:- Embedded Systems

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Full form of CISC is (CO1)
a) Compliment instruction set computer
b) Complex instruction set computers
c) Compliment instruction set components
d) Complex instruction set computers

Q.2 "ADD R12, R5" will store the result in (CO2)
a) R12 b) R5
c) Accumulator d) None of the above

Q.3 Standard form of RTOS is (CO1)
a) Real time operating system
b) Real transport operating system
c) Real transfer operating system
d) Reel transfer operating system

Q.4 Size of SRAM in Amega32 is (CO3)
a) 512 bytes b) 1024 bytes
c) 2048 bytes d) 4096 bytes

Q.5 Which timer/s possess an ability to prevent an endless loop hanging condition of PIC

a) Power-up Timer (PWRT)
b) Oscillator Start-Up Timer (OST)
c) Watchdog Timer (WDT)
d) All of the above

Q.6 Which convention is used for storing a multibyte data in AVR (CO3)
a) Big endian b) Little endian
c) Small endian d) Medium endian

Q.7 How many timers are there in PIC 16F874A microcontroller (CO3)
a) 1 b) 2
c) 3 d) 4

Q.8 Which among the CPU registers of PIC is not 8-bit wide? (CO3)
a) Status Register b) PCLATH Register
c) PCL Register d) FSR

Q.9 Which out of the following is not a directive? (CO2)
a) .DEVICE b) .ORG
c) .LDI d) .EQU

Q.10 A 14-bit program counter can access_____ bytes of memory locations.
a) 4K b) 8K
c) 16K d) 32K

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 A general purpose microprocessor has on chip ROM. (True/False) (CO1)

Q.12 Define the big endian convention used in microcontrollers. (CO2)

Q.13 Size of register bank in PIC microcontroller is_____ bytes (CO3)

Q.14 Full form of AVR is_____ (CO3)

Q.15 The standard I/O memory space in AVR is_____ bytes (CO3)

Q.16 A microcontroller is called computer on a chip (True/False) (CO1)

Q.17 Full form of USART is_____ (CO2)

Q.18 One nibble is equal to_____ bits (CO1)

Q.19 RAM is a volatile memory (True/False) (CO1)

Q.20 The carry generated from lower nibble to upper nibble is_____ (CO2)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 List the advantages of flash memory over other kind of ROMs. (CO2)

Q.22 Differentiate between a microprocessor and microcontroller (CO1)

Q.23 List the factors that need to be taken into account while choosing a microcontroller (CO2)

Q.24 Explain pipelining (CO1)

Q.25 Differentiate between Von neumann and Harvard architecture (CO2)

Q.26 Explain the working of a watchdog timer (CO3)

Q.27 Write short note on reliability of embedded system (CO2)

Q.28 How is C or ASM code transferred into a microcontroller. (CO5)

Q.29 Explain the embedded system architecture with a neat sketch. (CO2)

Q.30 Explain the power up timer feature of PIC microcontroller (CO3)

Q.31 Explain the use of PCLATH register (CO3)

Q.32 Differentiate between a general system and an embedded system (CO2)

Q.33 Explain the need of infinite loop in an embedded system (CO5)

Q.34 Explain the 8-level stack present in PIC (CO3)

Q.35 Explain the steps involved in interfacing a microcontroller with a sensor (CO4)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Compare 8051 and AVR microcontroller (CO3)

Q.37 With a neat sketch explain the block diagram of PIC Microcontroller (CO3)

Q.38 Explain the steps involved in interfacing a microcon troller with a multiplexed 7-segment display (CO4)

(**Note:** Course outcome/CO is for office use only)