Q.29 Differentiate between edge triggered and level triggered interrupts. (CO-04)

Q.30 Explain program status word of 8051 microcontroller. (CO-05)

Q.31 Describe main features of 8051 microcontroller. (CO-05)

Q.32 Differentiate between C and Embedded C programming. (CO-05)

Q.33 Explain the data types used in embedded C for 8051. (CO-05)

Q.34 Write the basic structure of embedded C program. (CO-06)

Q.35 What do you mean by interfacing? Draw a suitable diagram for the interfacing of LED and switch with 8051 microcontroller. (CO-06)

SECTION-D

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

Q.36 Define addressing modes. Explain different addressing modes of 8085 with examples. (CO-031)

Q.37 Draw the block diagram of 8055 and explain each block in detail. (CO-05)

Q.38 Explain the interfacing diagram of 7 Segment display with microcontroller and write a program to display the numbers from '0 to 9' on 7 segment displays. (CO-06)

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

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202443

4th Sem / Branch : Mechatronics

Subject:- Embedded Systems

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 The single IC which consists of ALU, control section and register section is called; (CO-01)

a) Microprocessor b) Microcontroller
c) Register d) Compiler

Q.2 Which of the following is not an essential component of an embedded system? (CO-02)

a) Microprocessor b) RAM
c) Keyboard d) Input/output device

Q.3 Which of the following is a non-volatile memory? (CO-01)

a) RAM b) DRAM
c) EEPROM d) Cache

Q.4 The System program used to translate directly an assembly language to machine language is called _____ (CO-02)

a) Compiler b) Assembler
c) Text editor d) Debugger

Q.5 Addressing in which the location of data is contained within the mnemonics is known as ____ (CO-03)

a) Immediate addressing
b) Implicit addressing
c) Register addressing
d) Direct addressing

Q.6 For stepper motor interface which port of 8051 used for forwarding operation? (CO-06)

a) Port 0 b) Port 1
c) Port 2 d) Port 3

Q.7 The 8051 can handle _____ interrupt sources. (CO-04)

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

Q.8 How many bits are used in the data bus of 8051?(CO-01)

a) 8 b) 16
c) 32 d) 24

Q.9 The total external data memory that can be interfaced to the 8051 is; (CO-02)

a) 32K b) 64K
c) 128K d) 256K

Q.10 How much I/O pins are there in 8051? (CO-04)

a) 4 b) 8
c) 16 d) 32

SECTION-B

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

Q.11 What is the maximum addressing capability of 8085? (CO-03)

Q.12 Name the non-mask able interrupt of 8085 microprocessor. (CO-04)

Q.13 Define two byte of instruction. (CO-03)

Q.14 Write the function of HOLD and HLDA pins of microprocessor. (CO-01)

Q.15 Define Op-Code. (CO-02)

Q.16 Write the function of S_0 and S_1 pins. (CO-01)

Q.17 Explain the function of XCHG instruction. (CO-02)

Q.18 DAA stands for _____ (CO-02)

Q.19 Write any two keywords used in Embedded C programming. (CO-06)

Q.20 Name the software used for programming a microcontroller. (CO-06)

SECTION-C

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

Q.21 Define microprocessor, and explain its evolution. (CO-01)

Q.22 Define bus and explain bus organization of 8085 with diagram. (CO-02)

Q.23 Explain the function of ALE with the help of suitable diagrams. (CO-02)

Q.24 What are arithmetic group instructions of 8085? with Explain any four instructions. (CO-03)

Q.25 Write the steps to execute a stored program. (CO-03)

Q.26 Write an assembly language program to find the addition of two 8-bit numbers. (CO-03)

Q.27 Draw the pin diagram of 8051 microcontroller.

Q.28 Explain the concept of instruction format with suitable examples. (CO-03)