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180844/170844/120844/
031045/30834

4th Sem / Branch : CSE/ECE/Med Elex/Mechatronics

Subject : Microprocessor & Peripheral Devices

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple Choice Questions. All questions are Compulsory. (10x1=10)

Q.1 8085 Microprocessor has how many pins (CO-1)

a. 30 b. 40
c. 24 d 20

Q.2 The processor status word of 8085 microprocessor has five flags namely. (CO-1)

a. S,Z,AC,P,CY b. S, OV, AC, P, CY
c. S, Z, OV, P, CY d. S, Z, AC, P, OV

Q.3 CALL instruction is a ____ instruction. (CO-2)

a. 4 Bytes b. 2 Bytes
c. 1 Bytes d. 3 Bytes

Q.4 XCHG instruction exchanges the content of H-L with _____ register pair. (CO-2)

a. D-E b. B-C
c. Stack Pointer d. PSW

Q.5 _____ is the only non-vectored interrupt in 8085 microprocessor. (CO-5)

a. TRAP b. INTR
c. RST7.5 d. RST 6.5

Q.6 Which one of the addressing not used in 8085? (CO-3)

a. Direct b. Register Indirect
b. Relative d. Immediate

Q.7 The relation among IC (Instruction Cycle), FC (Fetch cycle) and EC (Execute Cycle) is (CO-3)

a. IC = FC - EC b. IC = FC + EC
c. IC = FC = 2EC d. EC = IC + FC

Q.8 Bus Interface Unit (BIU) in 8086 performs the following functions : (CO-6)

a. Instruction decoding
b. Instruction fetch
c. Arithmetic and Logic operations
d. All the above

Q.9 If the microprocessor has 10 address lines, then the number of memory locations it is able to address is (CO-4)

a. 1024 b. 512
c. 2048 d. 4096

Q.10 The port that is used for the generation of handshake lines in mode 1 or mode 2 of 8255 is (CO-4)

a. Port A b. Port B
c. Port C d. None of the above

SECTION-B

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

Q.11 IR is a general purpose register in 8085 (T/F) (CO-1)

Q.12 The size of data bus in 8085 = _____ bits (CO-1)

Q.13 At which T-State in a machine cycle, microprocessor generates address? (CO-3)

Q.14 How many instruction formats are available in 8085? (CO-3)

Q.15 Name the addressing mode of DAA instruction. (CO-3)

Q.16 Name the Machine Cycle executed in MOV A, B Instruction. (CO-3)

Q.17 The size of I/O address in Memory Mapped I/O interfacing scheme is = ____bits (CO-4)

Q.18 Name the lowest priority interrupt in 8085. (CO-5)

Q.19 Name the pins used for serial communication is 8085. (CO-1)

Q.20 8086 is 16-bits microprocessor? (T/F) (CO-6)

SECTION-C

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

Q.21 Write a note on evolution of Microprocessor. (CO-1)

Q.22 Describe the instruction flow in 8085 with suitable diagram. (CO-1)

Q.23 Explain in brief the functions of all busses in 8085 with suitable diagram. (CO-1)

Q.24 Draw the block diagram of microcomputer and explain the function of each unit in brief. (CO-1)

Q.25 Define the purpose of each flag of 8085. (CO-1)

Q.26 Define function of each of the following pins: (CO-1)
INTR, TRAP, Rest Out, RD# IO/M#

Q.27 Define Instruction Cycle, Fetch Cycle and Execute Cycle. Also write the equation which shows the relation among them. (CO-3)

Q.28 Write the steps used by the Microprocessor to execute a program. Also relate the steps with the T-States. (CO-2)

Q.29 Describe the instruction formats defined in assembly language of 8085. (CO-3)

Q.30 Identify the addressing mode used in following instructions: (CO-3)
MOV D, M; ADD B; LXI H 2100H, CMA; STA 2100H.

Q.31 Write a program in assembly language to add the bytes of two adjacent memory location 2401H and 2402H. Store the final sum at 2500H (CO-3)

Q.32 Describe the various connections needed to interface a memory chip (CO-4)

Q.33 Distinguish Asynchronous and Interrupt Driven data transfer techniques (CO-5)

Q.34 Classify interrupts of 8085. (CO-5)

Q.35 Briefly explain the operating modes of 8255 PPI. (CO-4)

SECTION-D

Note: Long Answer Type Questions. Attempt any Two Questions out of three Questions . (2x10=20)

Q.36 Explain the interfacing of an 8Kbytes EPROM chip with the help of 3 to 8 line decoder. Also write its memory map. (CO-4)

Q.37 Draw a block diagram of 8085. Also explain the function of each unit. (CO-1)

Q.38 a. Briefly explain the DMA data transfer operation with suitable diagram with its advantages. (CO-5)

b. List various features of 8086 microprocessor. Also explain the pipeline architecture of 8086 in brief. (CO-6)

Note : Course Outcome (CO) mentioned in the question paper is for official purpose only.

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4th Sem. / Computer Engg.

Subject : Microprocessors & Peripherals Devices/ Microp. & App.

Time : 3 Hrs. M.M. : 100

SECTION-A

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

(Course Outcome/CO)

Q.1 Word size of 8085 is _____ bits. (CO-1)

Q.2 The size of PC is _____ bits. (CO-1)

Q.3 Name the format of instruction DAD D. (CO-3)

Q.4 Instruction cycle = fetch cycle + _____ (CO-2)

Q.5 Write two instructions used for subroutine operation. (CO-3)

Q.6 Write the I/O address Space of 8085. (CO-4)

Q.7 Name non-maskable interrupt found in 8085. (CO-5)

Q.8 Name the Data transfer technique in which handshaking is used. (CO-5)

Q.9 Expand PPI. (CO-4)

Q.10 Name two functional units of 8086. (CO-6)

SECTION-B

Note: Very Short answer type questions. Attempt any ten parts 10x2=20

Q.11 List four functions of ALU. (CO-1)

Q.12 Name the general purpose registers of 8085. (CO-1)

Q.13 Name the interrupt pins of 8085. (CO-1)

Q.14 Define instruction cycle. (CO-2)

Q.15 Identify the machine cycles of instruction MOV A, M. (CO-2)

Q.16 List the formats of instruction. (CO-3)

Q.17 Write the arithmetic equation of the instruction ADD D. (CO-3)

Q.18 Write down the four differences between Edge triggered and level triggered interrupts. (CO-4)

Q.19 Write four differences between peripheral I/O and memory mapped I/O. (CO-4)

Q.20 Define DMA operation. (CO-5)

Q.21 Write the main advantage of interrupt driven data transfer technique. (CO-5)

Q.22 Define the function of BIU and EU in 8086. (CO-6)

SECTION-C

Note: Short answer type questions. Attempt any eight questions. 8x5=40

Q.23 Explain how control signals are generated for memory and I/O with suitable logic diagram. (CO-1)

Q.24 Describe the evolution of microprocessor and its impacts on society. (CO-1)

Q.25 Explain memory read machine cycle with suitable timing diagram. (CO-4)

Q.26 Illustrate arithmetic group of instructions with suitable examples referring to 8085. (CO-3)

Q.27 Why decoding of memory address is required in memory accessing? Explain the working of 3-to-8 line decoder with its diagram. (CO-4)

Q.28 Classify the interrupts of 8085. Explain the steps to process the interrupt generated in 8085. (CO-4)

Q.29 Explain the control word format of 8255 and define the purpose of each bit. (CO-4)

Q.30 Differentiate asynchronous (handshake) mode of data transfer and interrupt driven data transfer. (CO-5)

Q.31 Write a program in assembly language to find largest of ten nos. stored at some memory locations. (CO-3)

Q.32 Differentiate minimum and maximum mode of configuration of 8086. (CO-6)

SECTION-D

Note: Long answer type questions. Attempt any three questions. 3x10=30

Q.33 Draw the pin diagram of 8085 and define the function of each pin. (CO-1)

Q.34 Write a program in assembly language to multiply two 8-bit nos. Also explain the process of multiplication. (CO-3)

Q.35 Explain programmed data transfer techniques with suitable diagrams. (CO-5)

Q.36 (a) Differentiate memory mapped I/O and peripheral I/O interfacing schemes. (CO-6)

(b) Draw the block diagram of 8086.

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/30834/062454

4th Sem. / Computer Engg.

Subject : Microprocessors and Peripherals Devices/ Microp.& App

Time : 3 Hrs. M.M. : 100

SECTION-A

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

(Course Outcome/CO)

Q.1 Word size of 8085 is_____bits. (CO-1)

Q.2 What is the function of address bus?. (CO-1)

Q.3 Name the format of instruction DADD. (CO-2)

Q.4 Write two instructions used for subroutine operation. (CO-3)

Q.5 Name the data transfer techniques. (CO-5)

Q.6 Name two functional units of 8086. (CO-6)

Q.7 RST 7.5 is mask able interrupt (T/F). (CO-4)

Q.8 Define stack. (CO-2)

Q.9 Define ALE. (CO-3)

Q.10 What is S/W interrupt. (CO-6)

SECTION-B

Note: Very Short answer type questions. Attempt any ten .questions out of ten questions. 10x2=20

Q.11 Name the interrupt pins of 8085. (CO-1)

Q.12 List four function of ALU. (CO-1)

Q.13 Write the arithmetic equation of the instruction ADD D. (CO-2)

Q.14 Explain peripheral I/O &memory mapped I/O. (CO-4)

Q.15 Define DMA operation. (CO-5)

Q.16 What is the function of Accumulator? (CO-3)

Q.17 What is NOP? (CO-4)

Q.18 What is handshaking (CO-4)

Q.19 Explain DMA. (CO-5)

Q.20 What is a buffer?. (CO-2)

Q.21 What is assembler?. (CO-6)

Q.22 What is the function of O/P devices? (CO-6)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. 8x5=40

Q.23 Explain the evolution of microprocessor & its impacts on society. (CO-1)

Q.24 Describe arithmetic group of instruction with suitable example referring to 8085. (CO-2)

Q.25 Classify the interrupts of 8085 in detail (CO-4)

Q.26 Differentiate minimum & maximum mode of configuration of 8086. (CO-6)

Q.27 Discuss various flags of 8085. (CO-4)

Q.28 Write the various application of microprocessor. (CO-6)

Q.29 Write down various addressing modes of 8085. (CO-5)

Q.30 What is memory interfacing?. (CO-6)

Q.31 Draw timing diagram of memory read cycle. (CO-4)

Q.32 Differentiate between Hardware & Software interrupt. (CO-5)

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. 3x10=30

Q.33 Draw and discuss the pin diagram of 8085 in details. (CO-1)

Q.34 Explain programmed data transfer techniques with suitable diagrams. (CO-3)

Q.35 Discuss and draw the block diagram of 8086 in details. (CO-6)

Q.36 Write short note on the following:- (CO-4)

a) stack

b) Non-mask able interrupt.

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