4th Sem. Branch : Comp. Eltx., Med Eltx., Mecatronics (5ᵗʰ Sem) Power Eltx.

Sub. : Microprocessors & Peripheral Devices / Microp. & App.

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?   (CO1)

    a) 30   b) 40

    c) 24   d) 20

Q.2   The processor status word of 8085 microprocessor has five flags namely: (CO1)

    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   (CO2)

    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.   (CO2)

    a) D-E   b) B-C

    c) Stack Pointer   d) PSW

Q5.   _____ is the only non-vectored interrupt in 8085 microprocessor.   (CO5)

    a) TRAP   b) INTR

    c) RST7.5   d) RST 6.5

Q.6   Which one of the addressing not used in 8085   (CO3)

    a) Direct   b) Register Indirect

    c) Relative   d) Immediate

Q.7   The relation among IC (Instruction Cycle), FC (Fetch cycle) and EC (Execute Cycle) is   (CO3)

    a) $IC = FC - EC$ b) $IC = FC + EC$

    c) $IC = FC + 2EC$ d) $EC = IC + FC$

Q.8   Physical address generated in 8086 is = ?   (CO6)

    a) 8 bits   b) 16 bits

    c) 32 bits   d) 20 bits

Q.9   If the microprocessor has 12 address lines, then the number of memory locations it is able to address is (CO4)

    a) 1024   b) 512

    c) 2048   d) 4096

Q.10   The BSR mode in 8255 is related with

    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 register in 8085 is used to store data? (True/False)   (CO1)

Q.12   The size of address bus is 8085 = _____ bits   (CO1)

Q.13   Define Machine Cycle.   (CO3)

Q.14 Give Example of 3-Byte Instruction in 8085. (CO3)

Q.15 Name the addressing mode of DAA instruction. (CO3)

Q.16 Name the Machine Cycle executed in MOV A, B instruction. (CO3)

Q.17 The size of I/O address in Memory Mapped I/O interfacing scheme is = _____ bits? (CO4)

Q.18 Name the lowest priority interrupt in 8085. (CO5)

Q.19 Serial Output Data (SOD) is related with SIM instruction (True/False) (CO1)

Q.20 8086 is designed using Pipeline architecture? (True/ False) (CO6)

SECTION-C

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

Q.21 Differentiate microprocessor and microcomputer with a suitable diagram. (CO1)

Q.22 Describe the data flow in 8085 with suitable diagram. (CO1)

Q.23 Explain how busses are organized in 8085. (CO1)

Q.24 Briefly explain the evolution of microprocessor. (CO1)

Q25 Elaborate the purpose of each flag of 8085. (CO1)

Q.26 Define function of each of the following pins: (CO1)

HOLD, HLDA, Reset Out, INTR, IO/M#

Q.27 Draw and explain the timing diagram of Opcode Fetch machine Cycle. (CO3)

Q.28 Write the steps used by the Microprocessor to execute a stored program. (CO2)

Q.29 Describe the instruction formats defined in assembly language of 8085. (CO3)

Q.30 Identify the addressing mode used in following instructions: (CO3)

MOV D, M ; ADD B; LXI H, 2100H ; CMA; STA 2100H.

Q.31 Write a program in assembly language to fine larger of two numbers stored at memory locations 2401H and 2402H. Store the larger no at 2500H. (CO3)

Q.32 Briefly explain addressing decoding and its types. (CO4)

Q.33 Briefly explain Programmed Data Transfer Techniques with suitable diagrams. (CO5)

Q.34 Classify interrupts of 8085. (CO5)

Q.35 Briefly explain the I/O operating modes of 8255 PPI. (CO4)

SECTION-D

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

Q.36 a. Differentiate Memory Mapped I/O and I/O Mapped I/O Schemes of Interfacing. (CO4)

b. Write a note on Serial Communication with 8085. (CO4)

Q.37 Draw a block diagram of 8085. Also explain the function of each unit. (CO1)

Q.38 a. Explain the use of Stack Pointer (SP) register in execution of PUSH & POP instructions. (CO3)

b. List various features of 8086 microprocessor. Justify with your answer that 8086 has pipelined architecture. (CO6)