

Code: A-C616125-A

I SEMESTER EXAM - 2025-26

3 x 160

Std.: XII

Sub: Computer Science - II

Marks: 50

Date:

Roll No.: _____

Time: 3 hrs

Q.1 A) Select the most appropriate option and rewrite the statement.

[4]

- 1) Which of the following single instruction of 8085 MPU used to clear the content of Reg. A
a) ORI 00H b) CMA c) XRI 00H d) ANI 00H
- 2) Which of the following is NOT a General Purpose Register in 8085?
a) B b) A c) Both a and b d) None of these
- 3) _____ instruction of 8085 does not affect any flags.
a) CMA b) JMP c) Both a and b d) None of these
- 4) Which of the following instruction is used to set the Carry Flag in 8085 ?
a) CMC b) RRC c) STC d) RLC

B) Attempt ANY TWO of the following.

[6]

- 1) Explain Register Direct and Direct addressing modes of 8085 microprocessor with an example of each.
- 2) Explain the following registers in Intel 8085 microprocessor
a) Program Counter (PC) b) Accumulator
c) ALU
- 3) List any three primary functions of CPU of microcomputer.

Q.2 A) Attempt ANY TWO of the following.

[6]

- 1) For the following instructions. Write the addressing mode, instruction group (depending on function) and length/size of the instruction (in terms of bytes)
a) DAD B b) JNC F001_H c) ORI 00_H
- 2) What is multiplexed address/data bus? State the significance of ALE pin in it.
- 3) Explain CALL and RET instruction used in 8085.

B) Attempt ANY ONE of the following.

[4]

- 1) Define bit pattern of flag register and explain the significance of each flag bit.
- 2) What is Branching Instruction? Explain any six conditional branching instructions of 8085 MPU.

Q.3 A) Attempt ANY TWO of the following.

[6]

- 1) Explain the working of following 8085 instructions with suitable examples
a) CMC b) LDAX c) LHLD
- 2) The accumulator of 8085 microprocessor contains data B7H and register C contains 12H. What will be the content of the accumulator after execution of each of the following instructions independently?

OPCODE	OPERAND	AFTER EXECUTION OF INSTRUCTION
SUB	C	
CMA		
XRI	BF _H	

- 3) Explain the following system buses of 8085 MPU

a) Address Bus b) Control Bus c) Data Bus

B) Attempt ANY ONE of the following.

[4]

- 1) Explain the following instructions of Intel 8085 microprocessor with an example.
a) DAA b) CMP
- 2) Draw and explain the programming model of 8085 MPU

P.T.O

Q.4 A) Attempt ANY TWO of the following.**[6]**

- 1) Give any six features of Intel 8085 microprocessor
- 2) Write appropriate instruction for each of the following tasks
 - a) Add contents of HL pair to itself
 - b) Rotate contents of accumulator towards left without carry bit
 - c) Initialise stack pointer with a 16 bit memory address E009_H
- 3) Explain the following characteristics of Transmission media.
 - a) Attenuation
 - b) Cost of media
 - c) Bandwidth

B) Attempt ANY ONE of the following.**[4]**

- 1) Write a short note on Evolution of microprocessor giving one example of each generation (ANY 4 generations - 1 mark each)
- 2) Explain the following instructions with working diagram and an example.
 - a) RAR
 - b) RAL (2 mark each)

Q.5 Attempt ANY TWO of the following.**[10]**

- 1) A block of data is stored in memory location from D051_H. Length of the block is stored at D050_H. Write an assembly language program that counts the occurrence of data byte 4F_H in the given block. The program must store the result in Reg. B
- 2) Write an assembly language program to copy the contents of a block of memory which is from C001_H to C007_H in reverse order to another block which begins from D001_H
- 3) Study the given program and answer the question given below

Label	Mnemonics/Operand
START :	MVI B, 0AH
	LXI H, 2000H
	MVI A, 01H
LOOP :	MOV M, A
	INX H
	DCR B
	JZ END
	ADI 02H
	JMP LOOP
END :	RST 1

- i) Write the purpose of the program.
- ii) Write comments for each instruction used in the program.
- iii) Write the result along with their corresponding memory locations.

(2)**(2)****(1)****OR**

- 1) Write an assembly language program to subtract the number stored in memory location C031H from the number stored in C030H. Store the absolute difference at memory location C032H
- 2) Write an assembly language program to exchange the contents of block stored in memory location from C031H to C035H and D031H to D035H.

3) Trace (Dry run / execute) the following program and fill in the blanks

MVI B, 08H
MVI C, 03H
MVI A, 01H
ANI 05H
STA D000H
ADD C
MOV D, C

RESULT :

- i) [Reg A] = _____
 - ii) [Reg B] = _____
 - iii) [Reg C] = _____
 - iv) [Reg D] = _____
 - v) [D000] = _____
-