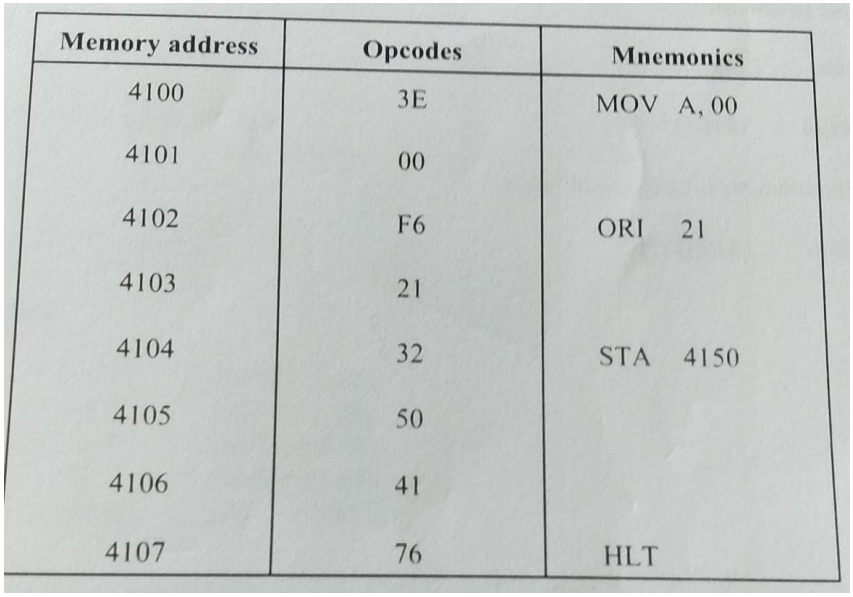
Q. No.	Analytical Questions	Processor
1	In ASCII code number 0 through 9 are represented as 30 through 39 respectively. Write an assembly language program using 8085 instructions to convert and ASCII number to decimal number.	8085

Memory address	Opcodes	Mnemonics
4100	21	LXI H, 4150
4101	50	
4102	41	
4103	7E	MOV A, M
4104	DE	SUI 30
4105	30	
4106	FE	CPI 0A
4107	0A	
4108	DA	JC LOOP
4109	0D	
410A	41	
410B	3E	MVI A, FF
410C	FF	
410D	23	LOOP INX H
410E	77	MOV M, A
410F	76	HLT

Input & output

ASCII NUMBER (HEX)	DECIMAL EQUIVALENT
30	00
31	01
32	02
33	03
34	04
35	05
36	06
37	07
38	08
39	09

2	To Mask off MSB Bits, write an assembly language program using **ANI** instruction of 8085 Microprocessor and store it in memory location 4151. For Setting off Bits, write an assembly language program using **ORI** instruction of 8085 Microprocessor and store it in memory location 4151. 	8085

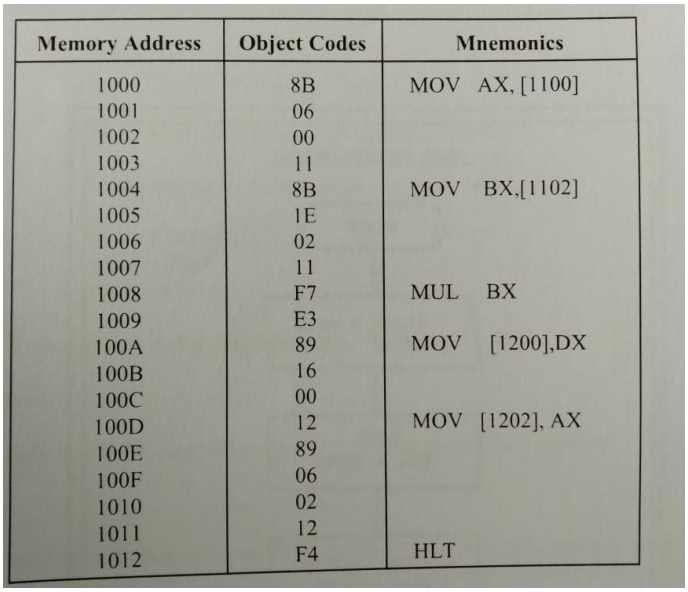
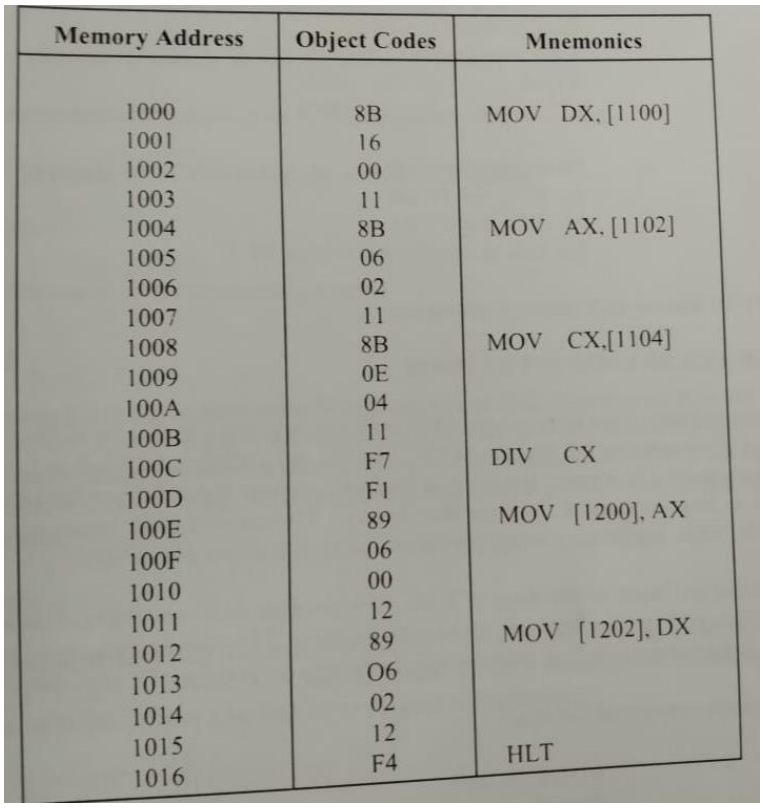
Memory address	Opcodes	Mnemonics
4100	3E	MOV A, 00
4101	00	
4102	F6	ORI 21
4103	21	
4104	32	STA 4150
4105	50	
4106	41	
4107	76	HLT

3	a) Write an ALP using 8086 Microprocessor to add two 16-bit data from locations 1200 to 1203 and store the LSB in 1300H and MSB in 1301H.	8086

Memory Address	Object Codes	Mnemonics
1000	8B	MOV AX, [1100]
1001	06	
1002	00	
1003	11	
1004	03	ADD AX,[1102]
1005	06	
1006	02	
1007	11	
1008	89	MOV [1200], AX
1009	06	
100A	00	
100B	12	
100C	F4	HLT

b) Write an ALP using 8086 to subtract two 16-bit data from locations 1200 to 1203 and store the LSB in 1300H and MSB in 1301H.

Memory Address	Object Codes	Mnemonics
1000	8B	MOV AX, [1100]
1001	06	
1002	00	
1003	11	
1004	2B	SUB AX,[1102]
1005	06	
1006	02	
1007	11	
1008	89	MOV [1200], AX
1009	06	
100A	00	
100B	12	
100C	F4	HLT

4	a)Write an ALP using 8086 Microprocessor to Multiply two 16-bit data from locations 1200 to 1203 and store the LSB in 1300H and MSB in 1301H  b) Write an ALP using 8086 Microprocessor to Divide two 16-bit data from locations 1200 to 1203 and store the LSB in 1300H and MSB in 1301H 	8086

Memory Address	Object Codes	Mnemonics
1000	8B	MOV AX, [1100]
1001	06	
1002	00	
1003	11	
1004	8B	MOV BX,[1102]
1005	1E	
1006	02	
1007	11	
1008	F7	MUL BX
1009	E3	
100A	89	MOV [1200],DX
100B	16	
100C	00	
100D	12	MOV [1202], AX
100E	89	
100F	06	
1010	02	
1011	12	
1012	F4	HLT

Memory Address	Object Codes	Mnemonics
1000	8B	MOV DX, [1100]
1001	16	
1002	00	
1003	11	
1004	8B	MOV AX, [1102]
1005	06	
1006	02	
1007	11	
1008	8B	MOV CX,[1104]
1009	0E	
100A	04	
100B	11	
100C	F7	DIV CX
100D	F1	
100E	89	MOV [1200], AX
100F	06	
1010	00	
1011	12	
1012	89	MOV [1202], DX
1013	O6	
1014	02	
1015	12	
1016	F4	HLT

6	Write an ALP using 8086 Microprocessor to perform array operation. Get the Sum of N numbers in a word array and store the result in 1200. Start the data array from 1100.	8086