2111M114

Candidate's Seat No : 3049

B.Sc. (Sem.-5) Examination

CC 302

Electronics

Time : 2-30 Hours]

November 2019

[Max. Marks : 70

Instructions : (1) Figures to the right indicate Full Marks.
(2) All questions are compulsory.
(3) Symbols have their usual meanings.

1	(a)	(i)	Draw a circuit of 2 × mod 5, mod 10 counter & explain its working.	7
		(ii)	Draw a circuit of 3 bit synchronus counter & explain its working.	7

OR

1	(a)	(i)	Write note on decoding gates.	7
		(ii)	Explain conversion between Moore & Mealy models.	7
	(b)		Answer the following in short questions (any four) :	4
		(i)	Define Glitch	
		(ii)	What is decade counter?	
		(iii)	Define Ripple counter.	
		(iv)	How many flip-flop are required to construct mod 64 counter?	
		(v)	What is the largest binary number represented by a mod 5 counter?	
		(vi)	What is an exitation map?	

2	(a)	(i)	Draw the block diagram of IC 8085 & explain all 6 blocks.	7
		(ii)	Draw the timing diagram of memory read cycle & explain all T states.	7

OR

2	(a)	(i)	Explain in brief FLAG register.	7
		(ii)	Explain about "Generating control signals".	7
	(b)		Answer in short (any four) :	4
		(i)	Give the full form of ALE	
		(ii)	Give the full form of BCD	
		(iii)	Why data bus is called bidirectional?	
		(iv)	Stack pointer is a .... bit register.	
		(v)	Opcode fetch requires .... T states.	
		(vi)	IC 8085 has .... pins.	

3	(a)	(i)	Explain about Data transfer, Branch & Arithmetic instruction in detail.	7
		(ii)	Give timing diagram of IN instruction.	7

OR

3	(a)	(i)	Give comparision of memory mapped I/O & peripheral I/O.	7
		(ii)	Write a program to perform the following instructions & verity the output	7

(1) LOAD 3B H in register C
(2) LOAD AC H in register D
(3) Increment the content of register C by 1
(4) Add the content of both the gegister & display the sum at O/P Port 2.

[P.T.O.

(b) Answer in short (any three) : 3
   (i) The 8085 microprocessor uses a .... bit databus
   (ii) MVI A, 10 H is a .... byte instruction
   (iii) State the difference between MOV & MVI instruction
   (iv) OUT is a .... byte instruction.
   (v) Peripheral I/O requires .... bit address.

4 (a) (i) Write program for transfer of 16 bytes of data stored in memory location at 7
   CO 70 H to new memory location CO 90 H. (Choose your own 16 bytes of data).
   (ii) A set of 3 readings is stored in memory location starting at DO 70 H sort them in 7
   ascending order Data (H) 88, 43, 59.

OR

4 (a) (i) Accumulator contents are AA H & CY = 0. Illustrate accumulator content after 7
   execution of instruction RRC twice.
   (ii) Accumutator contents are AA H & CY = 0. Illustrate accumutator content after 7
   execution of instruction RAR twice.

(b) Answer in short (any three) : 3
   (i) RLC
   (ii) RAL
   (iii) XRA A
   (iv) INX B.

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