

Digital Logic Design

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Assignment # 07

(Q1) A register is an electronic device consists of a series of flip-flops to store data bits and moving the data bits.

The length of the stored binary word depends on the number of flip-flops that make of the register.

(Q2) The storage capacity of a register that can retain one byte of data is 8 bits. This particular register will be an 8-stage shift register.

(Q3) The shift capacity of a register permits to store and make data from one stage to another within, into, or out of register.

(Q4) Since the shift register is initially cleared.

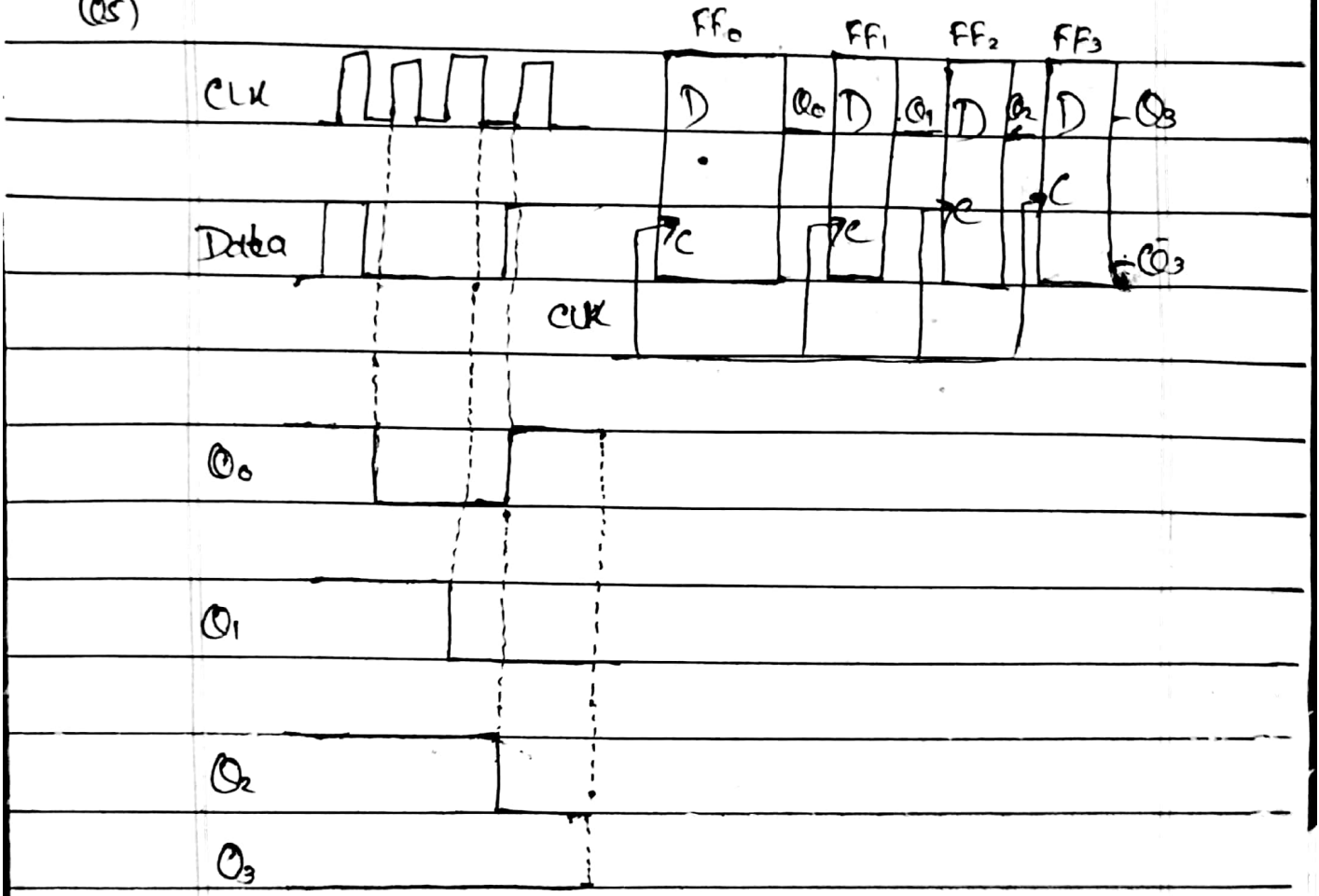
Initially 0000

CLK1 1000

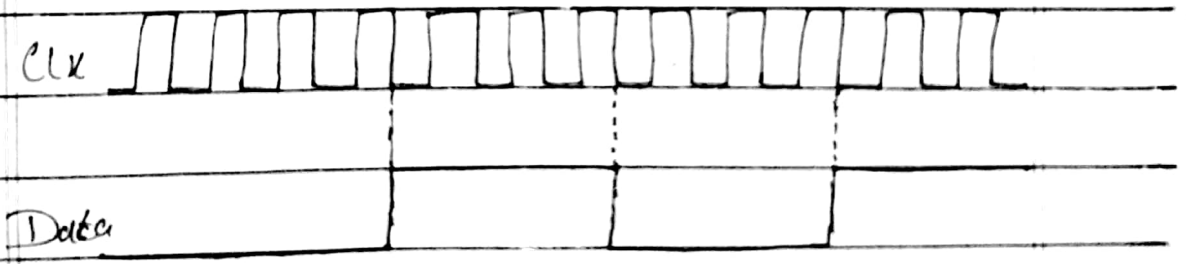
CLK2 1100

CLK3 0110

(Q5)



(Q6)



Initially 1100011000

CLK	Data	D	SR(01)	Qout
CLK ₁	01100011000			
CLK ₂	00110001100			
CLK ₃	00011000110			
CLK ₄	00001100011			
CLK ₅	10000110001			
CLK ₆	11000011000			

CLK7 01100001100

CLK8 00110000110

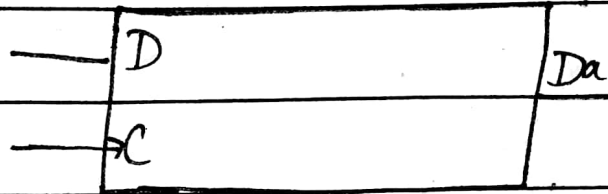
CLK9 00011000011

CLK10 10001100001

CLK11 11000110000

CLK12 01000110000

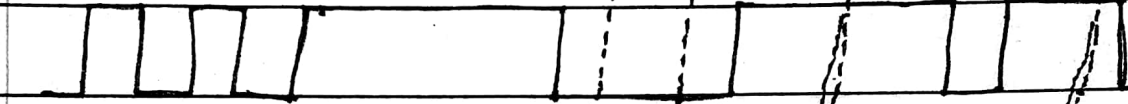
(Q7)



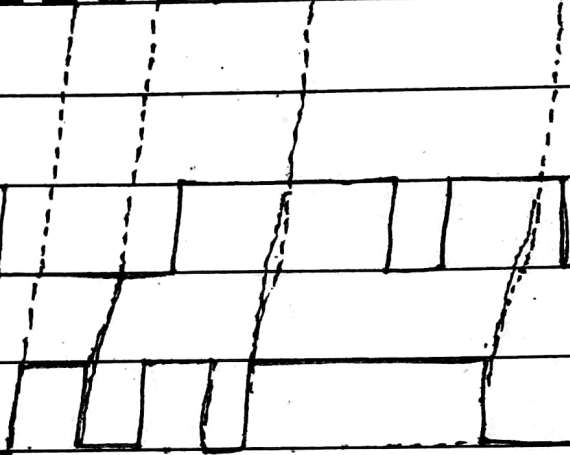
Data in:



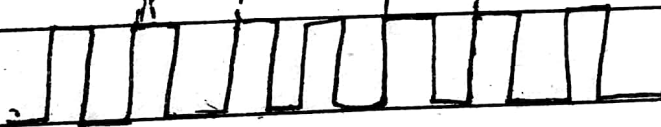
clk



Data out:



(Q8)



The Data bits stored are:

11011010 (2)

