COE 312 ASSIGNMENT

IDE ALEXIUS AZIBANYE

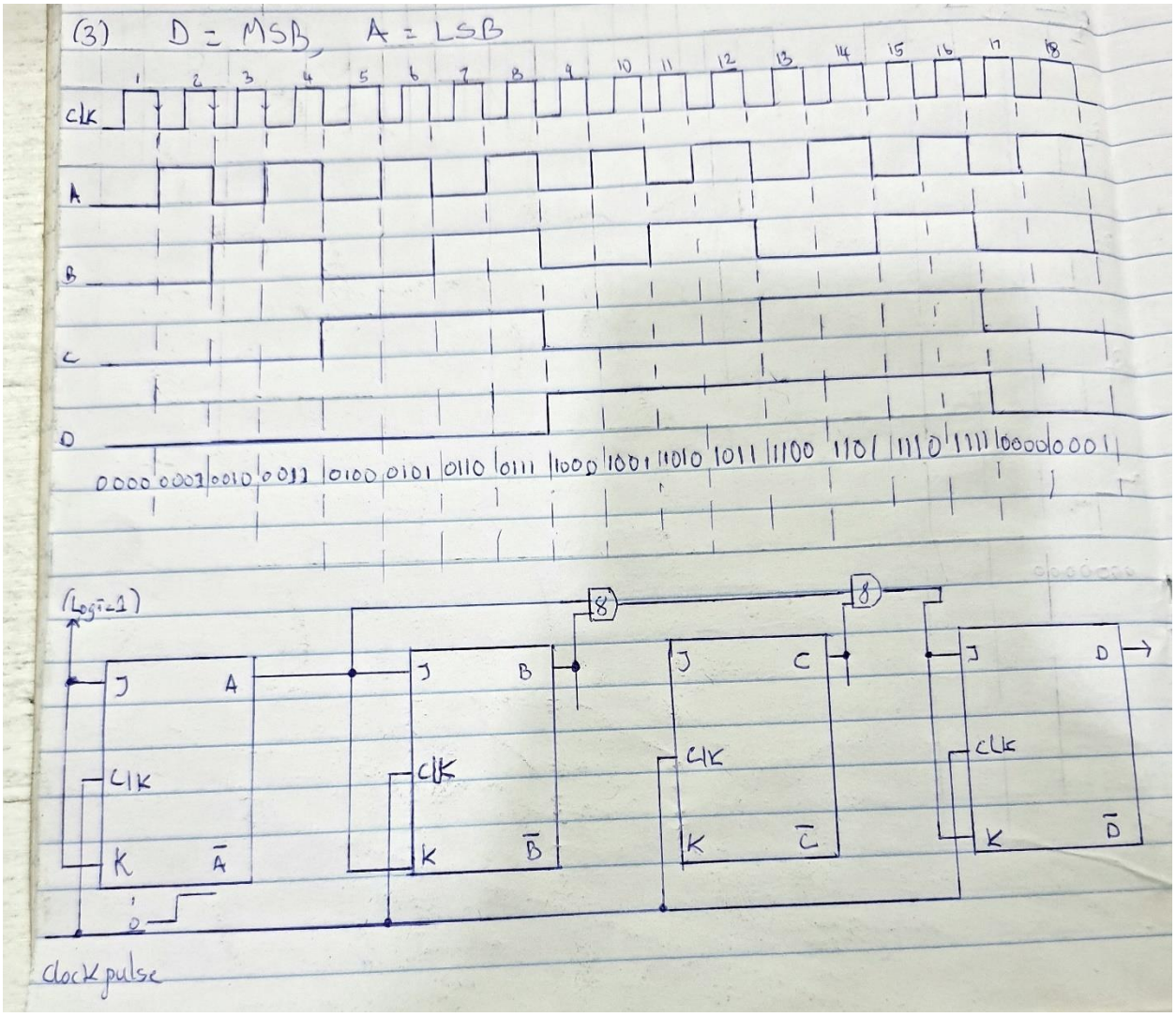
17/ENG02/032

COMPUTER ENGINEERING.

SUBMITTED TO ENGR. ADIGUN LEVEL ADVISOR VIA LMS.

ASSIGNMENT 1

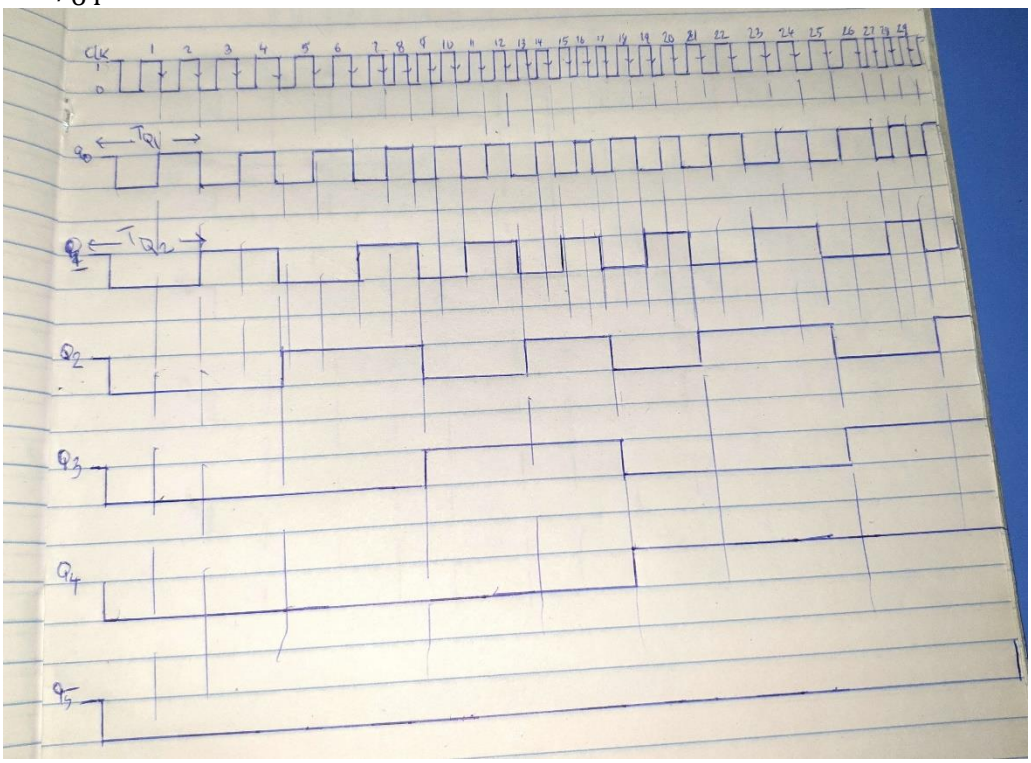
Designing a 4-bit Binary Counter.



ASSIGNMENT 2

a) A counter with six FFs (Q_0, Q_1, Q_2, Q_3, Q_4, Q_5) will = 2^6 which will equal to = 64; There the Mod number of the Counter is MOD=16.

b) The Frequency of Q_5 is exactly one-half of the frequency of Q_4 therefore frequency will be $^1/_{64}{}^{th}$ of 1Mhz.

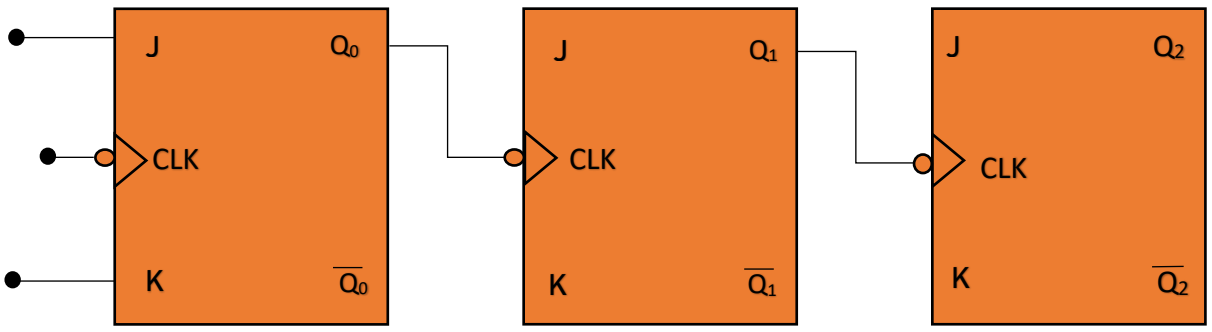


c) The range counting states of the counter is ranging from Q_5-Q_0 (0 0 0 0 0 0 – 0 1 1 1 1 0) Q_5= MSB, Q_0= LSB.

d) After the starting count of "0 0 0 0 0 0", the 129th pulse will be "0 0 0 0 0 1".

ASSIGNMENT 3

- Designing a 3-bit Asynchronous (Ripple) Counter.



Timing Diagram