

Assignment 1

Deadline: Thursday April 5,-2021

- No Assignment will be accepted after the deadline.
- You need to submit the assignment in Hard-form (your own hand-written on paper) over the slate.
- **CALCULATOR IS NOT ALLOWED**
- Best of Luck.

Name: _____

Roll No. _____(on each page)

Question # 1: Complete the table. (4 bits: -8,4,2,1)

Decimal	BCD	Hexa	Octal
98			
	10011000		
			2673
		ABCD	

Question # 2: Multiply in the 2's complement form

(a) 01101010 by 11110001 . (b) 219 by 15

Question # 3: Divide in the 2's complement form

(a) 10001000 by 00100010. (b)-145 by + 5

Question # 4: Perform the following and verify the answer:

(a) (ABC)₁₆+ (1A3)₁₆

(b) (F1)₁₆ – (A6)₁₆

(c) (110)₁₀ minus (84)₁₀= (?)₂

Question # 5: In a certain application, a 4-bit binary sequence cycles from 1111 to 0000 periodically. There are four-bit changes, and because of circuit delays, these changes may not occur at the same instant. For example, if the LSB changes first, the number will appear as 1110 during the transition from 1111 to 0000 and may be misinterpreted by the system. Illustrate how the Gray code avoids this problem with a suitable example.