EE2026 (Part 1)
Tutorial 2 - Questions

Number systems

1. (a) What is the ordinary 8 bit binary equivalent of the decimal number 250?
   (b) What decimal number does the above bit pattern correspond to if interpreted as
   i) a signed magnitude number
   ii) a 1's complement number and
   iii) a 2's complement number?

2. Show how the following can be added in 2's complement notation using 8-bit arithmetic

   (a) (-1) + 45 (b) -128 + (-60)

3. Compute and give the final answer in 2's complement notation:
   $(10100)_{2's} + (00100)_{SM}$

4. Convert the 8421 BCD number 0100011000100011 into decimal.