

EE2026 (Part 1)

Tutorial 1 - Questions

Number systems

1. (a) Convert the decimal number 166.34 into binary.
(b) Convert the decimal number 1400.16 to hexadecimal.
(c) Convert the binary number 101011100.000111 into octal.
(d) Convert the hexadecimal number A59.FCE to binary.
(e) $(62)_x - (26)_x = (34)_x$. Identify x .
2. Convert the following decimal numbers into 8-bit signed magnitude representations:
(a) +127 (b) -0 (c) -55
3. Convert the following signed decimal numbers into 10 bit 1's complement representations.
(a) +43 (b) -1 (c) -128
4. Convert the following 2's complement numbers to their signed decimal equivalents:
(a) 10000 (b) 10000001