

# Digital Systems

## Numbering Systems

1. Convert the following decimal numbers to binary:
  - (a) 2058
  - (b) 34
  - (c) 15.134
  - (d) 0.456
2. Convert the following binary numbers to decimal:
  - (a) 1011010
  - (b) 100001110
  - (c) 10.0110
  - (d) 0.101
3. Convert the binary number 10101010001.100100101011 to the following bases:
  - (a) base 4
  - (b) base 8
  - (c) base 16
  - (d) base 32
4. Convert the following hexadecimal numbers to binary and decimal:
  - (a) A6
  - (b) 29
  - (c) B0F1
  - (d) C23E
5. Perform the following number conversions:
  - (a)  $3480_{(10)}$  to hexadecimal and octal
  - (b)  $2157_{(16)}$  to base 4
  - (c)  $21011_{(3)}$  to base 9
  - (d)  $1100010111_{(2)}$  to octal