

Multiple-Choice Test

Chapter 01.04 Binary Representation

- $(25)_{10} = (?)_2$
 - 100110
 - 10011
 - 11001
 - 110010
- $(1101)_2 = (?)_{10}$
 - 3
 - 13
 - 15
 - 26
- $(25.375)_{10} = (?.?)_2$
 - 100110.011
 - 11001.011
 - 10011.0011
 - 10011.110
- Representing $\sqrt{2}$ in a fixed point register with 2 bits for the integer part and 3 bits for the fractional part gives a round-off error of most nearly
 - 0.085709
 - 0.03921
 - 0.1642
 - 0.2892
- An engineer working for the Department of Defense is writing a program that transfers non-negative real numbers to integer format. To avoid overflow problems, the maximum non-negative integer that can be represented in a 5-bit integer word is
 - 16
 - 31
 - 63
 - 64

6. For a numerically controlled machine, integers need to be stored in a memory location. The minimum number of bits needed for an integer word to represent all integers between 0 and 1024 is
- (A) 8
 - (B) 9
 - (C) 10
 - (D) 11

[Complete solution](#)