

From: Digital Electronics - by Ronald J. Tocci , Prentice Hall International (Customized Edition for SEEE, Singapore Polytechnic.)\ Questions from end of Chapter 1: 1.1, 1.2, 1.3, 1.4, 1.6

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1.1 Which of the following are analog or digital quantities?

- (a) number of atoms in a sample of material
- (b) Altitude of an aircraft
- (c) pressure in a bicycle tire
- (d) current through a speaker
- (e) timer setting on a microwave oven

1.2 Convert the following binary into their equivalent decimal

- (a) 11001_2
- (b) 1001.1001_2
- (c) 10011011001.10110_2

1.3 Using six bits, show the binary counting sequence from 000000 to 111111.

1.4 What is the maximum number that we can count up to using 10 bits?

1.6 Draw the timing diagram for a digital signal that continuously alternate between 0.2 V (binary 0) for 2 ms and 4.4V (binary 1) for 4ms.