

Computer Organization Basics: Questions

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Short Answer:

#1 What's the largest value a 18 bit word could represent?

262143

#2 Given the decimal number 4270, show the Binary and Hex value.

binary - 1000010101110 hex - #10AE

#3 Computers and Computing devices have been around for:

- A> 50 years
- B> 100 Years
- C> Over 1000 Years

True or False:

#4 - * The first modern electrical computers were developed for the Space Shuttle.

false

#5 - All information (data) stored on your MacBookPro is binary.

false

#6 - All binary data must be converted to decimal before it can be used for anything.

false

#7 - To convert a file from a JPEG to a GIF, you can just rename it, changing the extension from .jpg to .gif .

false

#8 - Computers are so fast because they can do many many things at one time.

false

Logic Puzzle:

#9 This is a garbage problem. You are coordinating the purchase of some new garbage cans for a small community. Garbage pickups will be Monday and Friday. Many residents, around 1,000 choose to have pickup on both days. But some, say another few hundred, choose to only pay for one of the days in particular, either friday or monday. Your challenge is to come up with a labeling system for the cans, so that not only can a particular can be traced back to its owner when needed, but the collection crew needs to be able to quickly and easily determine if the can should to be emptied or not.

The can company will emboss labels on the can, but unfortunately your task is complicated by the fact, that they can only provide labels in the form of X-## — where X is any upper-case letter of the alphabet, and ## is a two digit number between 00 and 99.

What is your scheme?

Have the first number of the ## represent if it is a 2 day or one day pick up, where 1 and 3 are Monday pick up, and 5 and 7 are Friday pick up, all of the even numbers in the first value would just be 2 day pick up. The second number in the ## and the Letter can be used for specific combinations as Letters can be converted into 8bit strings