Final Exam Study Guide

*It’s definitely a good idea to study old tests and quizzes. Most importantly, however, you should focus on answering the questions on this study guide and doing the practice problems.*

*There will be two parts to the test, 45 minutes each. Part 1 will take place on Tuesday the 11th of December. Part 2 will take place on Wednesday the 12th of December. Students will be allowed to take the exam on the 20th of December during the normal finals timeslot should they choose to do so.*

*Part 1 will cover computer science basics, HTML basics, and CSS basics. It will feature a 20-minute written component and a 25-minute computer component. You will be allowed to look things up on the computer component but not the written component.*

*Part 2 will cover CSS Layouts, Khan Academy Programming, and JQuery Basics. It will feature a 10-minute written component and a 35-minute computer component. As with part 1 of the test, you will be allowed to look things up on the computer component but not the written component.*

## Computer Science Basics

* Why were computers invented? When were the first computers made?
* What are the main components of computer hardware? What do they do?
* What are the two main types of computer software? What do they do?
* What is binary and how does it relate to how computers work?
* What is the binary number system? Can you write the numbers one through ten in binary?
* What is a zip file? When would you use it?
* What are bytes, kilobytes, megabytes, and gigabytes?

## HTML Basics

* What is the purpose of HTML?
* How do <!DOCTYPE html>, <html>, <head>, <title> and <body> tags form the basic structure of a webpage? That is, can you use these tags to create a webpage from scratch?
* When should you indent your code?
* What do the following tags do?
  + title
  + h1, h2, h3, h4, h5, h6
  + p
  + br
  + hr
  + img
  + a
  + ul, ol, li
  + div
  + span
  + script
  + style
  + meta
  + link
* What is the *src* attribute of the *img* tag used for?
* What is the *alt* attribute of the *img* tag used for?
* What is the *href* attribute of the *a* tag used for?
* What are absolute and relative paths?
* What makes br, hr, img, meta, and link tags different from other HTML elements?
* What does the HTML validator do?

## CSS Basics

* What is the purpose of CSS?
* What is inline CSS?
* What is embedded (internal) CSS?
* What is external CSS?
* What are the three ways to specify colors in CSS?
* What is inheritance with regards to CSS?
* What is the cascade?
* What are classes and ids, and how do they work?
* What are CSS rules, selectors, properties, and values?
* What do each of these CSS properties control?
  + color
  + background-color
  + background-image
  + text-align
  + font-weight
  + font-family
  + font-size
  + font-style

## CSS Layouts

* What are div and span tags used for?
* What is the CSS box model? What are its four parts?
* How does the border property work? What three values does it need to display?
* What is a floating element?
* What is absolute positioning?
* What is relative positioning?

## Khan Academy Computer Science

* What are variables?
* What are functions?
* What are *if statements*?

## JavaScript

* What is the purpose of JavaScript?
* Is JavaScript the same thing as Java?
* How does the *onclick* attribute work?
* What is JQuery?