Solutions for sample midterm exam

Section 1

1. c) OR will return more results than AND
2. a) 23
3. a) search engines have not crawled them
   b) they are created on demand or are otherwise temporary
   d) there are no links pointing to them
   e) no one has gotten around to doing it yet (note, this would happen when a webpage was first created – it may take some time before it is crawled even if there are links to it)

4. c) double word > word > byte > bit
5. b) ...to continually execute code until a given condition is no longer true
6. a) ...a sequence of 8 bits and 128 characters

Section 2

1) No, the interface is not an example of good interface design. The instructions state that you can get information about the difference between the two types of keys by pressing the Help button, but there is no Help button. This will be confusing and frustrating for users who do not know what the difference is between the two key types.

2) a) No, this is not a good example of interface design. Since the buttons are so close together, it would be very easy for a user to accidentally press the wrong button. If a user had taken the time to enter all their information, and then accidentally pressed the "Clear entire cart" button, the user would likely be very frustrated. Additionally, the user would probably feel like they had made an error, when actually the design was to blame. If the buttons weren't so close together it would be a lot less likely that the user would accidentally press the wrong button.

   b) answers may differ – it would be an improvement if there was considerably more space between the two buttons because the user would be far less likely to push the wrong button.

Section 3

1) Problem 1 – The algorithm does not give instructions describing how to drive from home to UBC, therefore it would be an impossible algorithm to follow for someone who doesn't know how to drive from home to UBC.

   Problem 2 – An algorithm is supposed to be a list of instructions, but Step 4 is not an instruction, it is a fact.

2) BRIGHT
   BLUE-GREEN

3) (also numbered 2 on the exam)
   a) `<a href="http://www.ubc.ca"> <img src="pic.jpg" /> </a>`
   b) `<h1>Meghan Allen</h1>`

      `<hr>`

      `<p>`

      `<b>Allen</b>`

      `</p>`

4) (numbered 3 on the exam)
   a) No, the JavaScript code will not work. The error is circled below.

```
function myAddingProgram(num1, num2)
{
     addTwoNumbers(num1,num2);
}
function addTwoNumbers(number1, number2)
{
     return num1 + num2;
}
```

   This error could be corrected by changing the circled code to be

```
     return addTwoNumbers(num1,num2);
```

   b) `alert(myAddingProgram(1,2));`

Section 4

The internet is a world-wide network of computers that share information using standard internet protocols. The term 'internet' refers to the entire network of computers, and the computers are located all over the world.

Section 5

1. i) photograph – raster because photographs typically use raster graphics
    ii) icon – raster
    iii) avatar – vector because it is better at modeling real figures
    iv) company logo (to be printed in a range of sizes) – vector because it will scale nicely and look equally good at each size

(There was no #2)

3. AARON was the computer program written by Harold Cohen that could create digital paintings.
4. Digital art can be different from traditional, non-computer art because it can be more interactive. For example, the image may change as the user interacts with it with a mouse. (There are lots of correct answers!)
5. The top left, top right and bottom right are written in a serif font.