**CS 130: Review for Exam 1**

**Chapters 1-6**

Terms – you should be able to define the following

* Pixel
* Variable
* Array
* Matrix
* String
* Floating-point number
* Integer
* Reserved words
* Functions
* Parameter
* Argument

1. What is the file extension for a Python program?
2. What is JES? JES is an example of an \_\_\_\_\_
3. In JES, what is the area where you write functions called?
4. In JES, what is the area where you write commands called?
5. What do the following commands do?
   1. file = pickAFile()
   2. picture = makePicture( file )
   3. explore ( picture )
6. What is the advantage of using **explore( picture )** over **show( picture )**?
7. What is the significance of using **indentation** when writing Python functions, loops, or decision statements?
8. What is an algorithm?
9. What is an encoding?
10. What is the difference between an algorithm and a program?
11. What does **def** mean? What does the statement **def someFunction(x, y):**  do?
12. What does **print** mean? What does the statement **print a** do?
13. What kind of quotes does Python use? What rules apply when using quotes?
14. What is the RGB color model?
15. What range of numbers are used in RGB color settings?
16. What is JPEG? What is the file extension of a picture saved in this format?
17. What is BMP?
18. What is PNG?
19. What is the **luminance** of a picture?
20. What is the HSV color model?
21. What is the CMYK color model?
22. Where is the CMYK color model mainly used?
23. Explain how a nested loop works when processing the pixels in a picture? Why and when are nested loops more efficient than other types of loops?
24. Know what the following programming statements do and how to use them in code:
    1. for – know how to write a for loop
    2. if – know how to write an if statement
    3. getPixels
    4. getPixel
    5. getWidth, getHeight
    6. getRed, getGreen, getBlue
    7. setRed, setGreen, setBlue
    8. getColor
    9. setColor
    10. getX, getY
    11. makeDarker, makeLighter
    12. clock()