

STUDY GUIDE, CSCI OR CITA 140

Chapters covered	What to study
Introduction	- Philosophy of incremental development - Algorithms
Chapter 1	- All
Chapter 2	- All
Chapter 3	- All
Chapter 4	- Through page 58

FORMAT OF TEST:

The test will be a combination of short answer questions, essays, multiple choice, writing functions, and debugging code errors.

Essay Samples:

- Discuss reasons why programmers use comments in their code.
- List and briefly define two of the type of variables discussed in Chapter 4. Also provide an example of each.

Short answer example:

- Briefly explain how the Processing window is “graphed” differently from the Cartesian graph system.
- What three colors are represented in the parameters for fill() ?
- The line() function has 4 parameters. What is the meaning of EACH one?
- What is the main difference between setup() and draw() in terms of how the code blocks are run.
- Use an English sentence or two to explain the following code:
`float mouseSpeed = abs(mouseX – pmouseX)`

Some definitions that we covered:

Variable, parameter, argument, function

Examples of multiple choice questions

- Which of the following programming languages is Processing's closest relative?
 - Python
 - C++
 - ActionScript
 - Java
- keyPressed() in Processing can be defined as a(n)
 - function
 - class
 - parameter
 - object

- The statement `background(0)` would render the background of a sketch in which color?
 - White
 - Black
 - Invisible
 - Gray
- Which of the following functions is like a windshield wiper in that when placed within the `draw()` structure can be used to clear the Display Window before the next frame is drawn?
 - `draw()`
 - `clear()`
 - `background()`
 - `fill()`
- The default for `frameRate()` in Processing is
 - 60
 - 5
 - 100
 - 30

Examples of writing code:

Be sure to write clearly and exactly the way they would look in your Processing program.

- Write the code for the following multiline comment.


```
Sketch is created by James Smith.
The program illustrates how variables work.
The first declaration is a global variable.
```
- Write the code for a circle that starts at 40 pixels from the top, 30 pixels from the left, is 20 pixels wide and 20 pixels high. (It's understood that it's drawn from center outward)
- Write the code to change the color of a stroke to white.

Find the 3 problems in the following block of code.

```
void mousePressed() {
  stroke(0);
  fill(blue);
  rectMode(center);
  rect(mouseX, mouseY, 16, 16, 20);
}
```