Unit 2 Review Questions

1	Select the computer science definition for: BRANCHING	a. A name attached to data so your code can work with it. b. Reusable code with a name c. Change the program execution based on a condition d. A named value that doesn't change during program execution.
2	Select the computer science definition for: FUNCTION	a. A name attached to data so your code can work with it. b. Reusable code with a name c. Change the program execution based on a condition d. A named value that doesn't change during program execution.
3	Select the computer science definition for: VARIABLE	a. A name attached to data so your code can work with it b. Reusable code with a name c. Change the program execution based on a condition d. A named value that doesn't change during program execution.
4	Select the computer science definition for: CONSTANT	a. A name attached to data so your code can work with it. b. Reusable code with a name c. A set of three values returned by the ranger sensors. d. A named value that doesn't change during program execution
5	Select the computer science definition of: MODULE	a. A named value that doesn't change during program execution. b. A name attached to data so your code can work with it. c. An external source of code that can be imported. d. A set of three values returned by the ranger sensors.
6	Select the computer science definition of: TUPLE	a. Changing the value with assignment, like adding 1. b. A name attached to data so your code can work with it. c. An external source of code that can be imported. d. A set of three values returned by the ranger sensors.
7	Select the computer science definition of: UPDATING A VARIABLE	a. Changing the value with assignment, like adding 1. b. A name attached to data so your code can work with it. c. An external source of code that can be imported. d. A set of three values returned by the ranger sensors.
8	Select the computer science definition of: BLOCKING	a. A function that prevents the next line of code from executing until it is completed. b. Interactively enter commands in the console and view output. c. An external source of code that can be imported. d. A function that returns immediately so the next line of code can execute.
9	Select the computer science definition of: NON-BLOCKING	a. A function that prevents the next line of code from executing until it is completed. b. Interactively enter commands in the console and view output. c. An external source of code that can be imported. d. A function that returns immediately so the next line of code can execute.

10	Select the computer science definition of: REPL	a. A function that prevents the next line of code from executing until it is completed. b. Interactively enter commands in the console and view output. c. An external source of code that can be imported. d. A function that returns immediately so the next line of code can execute.

Python Coding:

1	What is this code an example of?
	`while True:`
	`  if buttons.was_pressed(BTN_0):`
	`  break`
		a. Iteration
		b. Variable
		c. Function
		d. Safety interlock

2	What is this code an example of?
	`sleep(0.1)`
	`buttons.was_pressed()`
		a. Bouncing a button
		b. Debouncing a button
		c. Creating a function
		d. Using a variable

3	What line of code defines a function?	a. define function_name: b. def function_name: c. def function_name(): d. function_name()
4	What line of code is a function call?	a. function_name() b. function_name(): c. function_name d. call function_name
5	What line of code assigns a value to a variable?	a. GREEN b. do_launch = False c. if buttons.was_pressed(BTN_1): d. for n in range(3):

6	What does the variable **do_launch** keep track of?
	`do_launch = False`
	`if buttons.was_pressed(BTN_1):`
	`  do_launch = True`
	`  break`
		a. If the loop has finished
		b. If the loop has been broken
		c. If BTN_1 has been pressed
		d. If either button has been pressed

7	Which CodeAIR sensor is used for tracking and holding position?	a. Pressure sensor b. Laser rangers c. Optical flow sensor d. Light sensor
8	What must be included in your code to call the button_arm() function	a. def button_arm(): b. from safety import * c. from codeair import * d. while True:

9	What is a key component for keeping the drone flying at a desired altitude?	a. Laser rangers b. Pressure sensor c. Optical flow sensor d. Light sensor
10	What function reads the laser rangers?	a. data(RANGERS) b. rangers.data() c. get_data(RANGERS) d. rangers.read()
11	What line of code unpacks the tuple returned by get_data()?	a. get_data.unpack() b. fwd, up, down = get_data() c. get_data() = fwd, up, down d. (fwd, up, down) = get_data()

12	What is the result of the code?
	`up = 300`
	`too_close = 250`
	`if up < too_close:`
	`  return True`
		a. True is returned
		b. False is returned
		c. Nothing happens
		d. The program stops

13	What is the result of the code?
	`up = 250`
	`too_close = 300`
	`if up < too_close:`
	`  return True`
		a. True is returned
		b. False is returned
		c. Nothing happens
		d. The program stops

14	If fwd is always more than 300, what is the result of the code?
	`too_close = 300`
	`for i in range(30):`
	`  fly.steady(0.1)`
	`  fwd, up, down = get_data(RANGERS)`
	`  if fwd < too_close:`
	`  return True`
	`return False`
		a. True is returned
		b. False is returned
		c. Nothing happens
		d. The program stops

15	What code will cause a continuous speaker beep?	a. speaker.beep(440) b. speaker.beep(440, 100) c. speaker.beep(440, 0) d. speaker.on()

16	What will print after this code runs?
	`count = 2`
	`count = count + 1`
	`count = count + 1`
	`count = count + 1`
	`print(count)`
		a. 2
		b. 1
		c. 5
		d. 3

17	What will print after this code runs?
	`do_launch = False`
	`do_launch = not do_launch`
	`print(do_launch)`
		a. True
		b. False
		c. do_launch
		d. An error occurs

18	Which function is non-blocking?	a. fly.steady(seconds) b. fly.land() c. fly.start_forward() d. fly.forward(distance, velocity)

19	What is the result of the code?
	`count = 8`
	`count = count + 1`
	`if count == 8:`
	`    pixels.fill(WHITE)`
		a. All pixels are turned WHITE
		b. Nothing happens
		c. All pixels are turned off
		d. An error occurs

20	What function turns off all blue LEDs?	a. leds.set_off() b. leds.set(0) c. leds.set(BLACK) d. leds.set_mask(0, 0)