

## CST-186 Chapter 12 Study Guide

### True/False

Indicate whether the statement is true or false.

- \_\_\_\_\_ 1. The `games` module has a set of key constants.
- \_\_\_\_\_ 2. The `Animation` class is derived from the `Sprite` class.
- \_\_\_\_\_ 3. The greater the value passed to the `repeat_interval` parameter of the `Animation` constructor, the faster the resulting animation will play.
- \_\_\_\_\_ 4. Sound objects can only be created from WAV files.
- \_\_\_\_\_ 5. Calling a sound object's `stop()` method while the sound is not playing will produce an error.

### Multiple Choice

Identify the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 6. Which code snippet returns the status of the A key?
  - a. `games.key.is_pressed(games.K_a)`
  - b. `games.keyboard.is_pressed(games.K_a)`
  - c. `games.key.is_down(games.K_a)`
  - d. `games.keyboard.is_pressed(K_a)`
- \_\_\_\_\_ 7. What will an object of the following `Ship` class do?

```
class Ship(games.Sprite):
    def update(self):
        self.angle -= 1
        angle = random.randrange(360)
```

  - a. rotate clockwise
  - b. rotate counterclockwise
  - c. rotate to random angles
  - d. None of these
- \_\_\_\_\_ 8. About how many seconds will pass between the switching of images in the animation created by the following code?

```
games.Animation(images = image_files,
                 x = games.screen.width/2,
                 y = games.screen.height/2,
                 n_repeats = 0,
                 repeat_interval = games.screen.fps)
```

  - a. 1
  - b. 2
  - c. 4
  - d. not enough information given

\_\_\_\_\_ 9. About how many seconds will pass during a complete cycle of the animation created by the following code?

```
games.Animation(images = image_files,  
                 x = games.screen.width/2,  
                 y = games.screen.height/2,  
                 n_repeats = 0,  
                 repeat_interval = games.screen.fps)
```

- a. 1
- b. 2
- c. 4
- d. not enough information given

\_\_\_\_\_ 10. What can be passed to the images parameter of the Animation constructor?

- a. a list of strings for image file names
- b. a list of image objects
- c. Both of these
- d. None of these

\_\_\_\_\_ 11. What value must you pass to the Animation constructor's n\_repeats parameter to loop the resulting animation so that it plays continuously?

- a. -1
- b. 1
- c. 0
- d. "loop"

\_\_\_\_\_ 12. What value must you pass the music object's play() method to loop the currently loaded music track so that it plays continuously?

- a. -1
- b. 1
- c. 0
- d. "loop"

\_\_\_\_\_ 13. How many sound channels are available using the livewires game engine?

- a. 1
- b. 4
- c. 8
- d. 16

\_\_\_\_\_ 14. How many music channels are available using the livewires game engine?

- a. 1
- b. 4
- c. 8
- d. 16

\_\_\_\_\_ 15. What music object method ends the currently playing music?

- a. end()
- b. pause()
- c. wait()
- d. stop()

### Completion

Complete each statement.

16. The \_\_\_\_\_ object of the games module is used to test if a specific key is held down.

17. The \_\_\_\_\_ class of the games module is used to create objects for animations on the graphics screen.

18. \_\_\_\_\_ is the Animation object attribute for the animation's sequence of images.

19. The \_\_\_\_\_ function of the games module takes a string for the name of a sound file and returns a corresponding sound object.

20. A sound object's \_\_\_\_\_ method can be used to loop the sound.

**Matching**

*Match each item with a statement below*

- |                           |                                 |
|---------------------------|---------------------------------|
| a. <code>angle</code>     | d. <code>n_repeats</code>       |
| b. <code>Animation</code> | e. <code>repeat_interval</code> |
| c. <code>Frame</code>     |                                 |

- \_\_\_\_ 21. A single image in a sequence of images.
- \_\_\_\_ 22. An `Animation` constructor parameter for the delay between the switching of successive animation images.
- \_\_\_\_ 23. A `Sprite` object property that represents the object's facing, in degrees.
- \_\_\_\_ 24. A sequence of images displayed in succession.
- \_\_\_\_ 25. An `Animation` constructor parameter for the number of times the complete animation cycle will be shown.

**Short Answer**

26. What are the basic guidelines used to name key constants?
27. How is the `Animation` class related to the `Sprite` class?
28. How is an `Animation` object different from a `Sprite` object?
29. How is music handled differently than sound by the `livewires` game engine?
30. Why do programmers try to minimize repeated sections of code in a program?