CSE EOC Review

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Work with a partner to research the answers to the assigned questions. Then, share your information with the rest of the class.

1. What does a state diagram show?
2. The Light Bot activity demonstrated that computers work by:
3. Why is it a good idea to program a little at a time and test frequently?
4. A Boolean expression, such as an If-Then block in Scratch, executes by:
5. How is a Most Recent variable different from a Fixed variable?
6. Distinguish between and Accumulator and an Aggregator.
7. How is a Best-so-far variable different from a Most Recent variable?
8. When would a One-Way Flag variable be used?
9. Why is an Agile design process preferable to a Waterfall design process for software design?
10. What is an advantage and disadvantage to file compression?
11. Many variables have a maximum value of 255. What does that tell you about the memory used for that piece of information?
12. How is a color stored as digital information (RGB)?
13. Distinguish between an event and an event handler.
14. Explain each part of this line of Python code: **import** **matplotlib.pyplot** **as** **plt**
15. How are int, float, boolean , and string data types different?
16. What does def do in Python?
17. How is a Python function called (executed)?
18. Why is a Boolean expression also called a conditional?
19. What is the difference between using a + to concatenate vs using a + for numeric addition?
20. How would you get Python to return the 4th element a list called items?
21. How is a tuple different from a list?
22. What will be returned by the following expression?

range(3)



1. What will n be in the 3rd time through this for loop?

**for** n **in** range(5):



1. How long with the following while loop run?

while raw\_input() != winner:



1. When using Git, what is a commit?
2. What is data abstraction?
3. What is procedural abstraction?
4. What makes up a UML (Unified Modeling Language) Diagram for a class?
5. What happens when a class is instantiated?
6. For an ndarray image object named img, what information will len(img) give you?
7. For an ndarray image object named img, what information will len(img[0]) give you?
8. What would you input to determine the Red component of the 20th pixel in the 10th row of the image img?
9. What does the alpha channel control?
10. What is the purpose of a mask when using the paste method of PIL?
11. A field of CS that focuses on how computers and humans communicate with each other.
12. The pattern that separates a program in to discrete components of data, observer, and controller.
13. How do computers send large amounts of data over a network?
14. How is an IPv4 address formatted?
15. What is the purpose of DNS?

<http://samplehs.pltwcs.org/students/bkiGag3/sample.php?f=2>

1. What is the scheme and protocol?
2. What is the top level domain?
3. What is the resource?
4. What is f=2?
5. What feature of web pages tracks who you are and where you have been?
6. What are the automated programs the crawl the web for search engines called?
7. SYN 6, ACK 7, SYN 34, ACK 35
8. When navigating to drive.google.com, what tells you the address for google?
9. What group develops web standards?
10. What group coordinates the assignment of IP addresses and Domain Names?
11. How do you properly close the body section of an HTML document?
12. What tool external to a webpage can specify things like font and background colors?
13. If you want to send a secure message to someone else using Public Key encryption, what do you use to encrypt the message?
14. Who issues SSL certificates?
15. JavaScript is an example of
16. What language is commonly used for server-side scripting?
17. This is used to uniquely identify each entry in a MySQL table.
18. What is a query?
19. Why do you use a JOIN command?
20. What is software designed to do harm called?
21. The field of CS concerned with identifying and reducing vulnerabilities to attacks
22. A histogram is a visualization of data that shows this
23. Any tool that uses a graph or picture to extract meaning from data is called a
24. A model that programs individuals to follow specific rules with certain parameters so as to observe behavior.
25. Behavior that appears suddenly without being specifically programmed is referred to as
26. A pattern that emerges that is both self-similar and infinite in detail