1 True or False

Fill in the bubble for "A" if the answer is True. Fill in the bubble for "B" if the answer is False.

1. True/False: Strings can be written directly to a file with the write method, but numbers must be converted to strings before they can be written.
   
   **ANS:** True

2. True/False: The ZeroDivisionError exception is not raised when the program attempts to perform a modulus by zero.
   
   **ANS:** False

3. True/False: The readline method raises the fileExceeded exception when it has attempted to read beyond the end of the file.
   
   **ANS:** False

4. True/False: Both lists and strings are mutable.
   
   **ANS:** False

5. True/False: The find string method returns a boolean value (true or false) indicating the presence of one string in another.
   
   **ANS:** False

6. True/False: To access a 2-dimensional list in row-order, the inner loop should control varying the row index.
   
   **ANS:** False

7. True/False: A file name that does not contain a path as an argument to the open file function allows the python interpreter to assume the file’s location can be different from that of the program.
   
   **ANS:** False

8. True/False: A file once opened in read mode could be closed and reopened in write mode.
   
   **ANS:** True

9. True/False: We can associate multiple try suites with one except clause.
   
   **ANS:** False

10. True/False: The return value of the open function is a reference to a file object.
    
    **ANS:** True

11. True/False: An IOError is also called an Intentional Operative Error.
    
    **ANS:** False

12. True/False: The method *rstrip()* removes or ‘strips’ specific characters from the beginning of the string.
    
    **ANS:** False

13. True/False: The function *isalnum()* returns true if the string contains numbers only, returns false otherwise.
    
    **ANS:** False
14. True/False: A try block is executed after an exception is raised.
   ANS: False

15. True/False: Substring is synonymous with list slicing.
   ANS: True

16. True/False: A string is numeric if it contains no numeric characters.
   ANS: False

17. True/False: Lists are denoted by [ ] square brackets, tuples are denoted by { } curly brackets.
   ANS: False

18. True/False: It is possible to nest a list inside of another list.
   ANS: True

19. True/False: Given a list \( l \), \( l[len(l)] \) will be the last item in the list.
   ANS: False

20. True/False: Invalid indexes do not cause slicing expressions to raise an exception.
   ANS: True
2 Multiple Choice

Fill in the bubble that corresponds to your answer choice.

21. What is the output of the following code? \( \text{letters} = \text{'lmnopqr'} \)
\[
\text{print(letters[1 : 4])}
\]
(A) lmno
(B) mno
(C) mnop
(D) opqr
(E) mp

ANS: B

22. What is the output of the following code? \( \text{letters} = \text{'lmnopqr'} \)
\[
\text{print(letters[1 : 4 : -1])}
\]
(A) onml
(B) rqp o
(C) onm
(D) mno
(E) mp

ANS: C

23. A try suite is ...

(A) A suite that always executes without exceptions.
(B) One or more statements that can potentially raise an exception.
(C) A command statement.
(D) A type of variable.
(E) none of the above

ANS: B

24. What is the output of the following code? \( a = \text{['5','b','A']} \)
\[
a.sort()
\text{print(a)}
\]
(A) ['5','A','b']
(B) ['b','A',5]
(C) ['b','A','5']
(D) [5,'A','b']
(E) none of the above

ANS: A

25. You are writing a program using a file whose variable name is 'textfile'. To close the file, the proper syntax is...

(A) close_file(textfile)
(B) textfile.closefile()
26. Which structures cannot be nested?
   (A) list
   (B) tuple
   (C) loop
   (D) if/else block
   (E) file
   **ANS: E**

27. An item’s ____ is its position in a list.
   (A) in
   (B) locate
   (C) index
   (D) count
   (E) i
   **ANS: C**

28. What is the output of the following code?
   ```python
   names = 'Scott, Lisa, Daniel, Lee'
   if 'Dan' in names:
       print('Dan')
   ```
   (A) True
   (B) False
   (C) Dan
   (D) The program will output nothing.
   (E) None of the above, syntax error.
   **ANS: C**

29. What will the following code do?
   ```python
   f = open('file.txt', 'r')
   file.write('25')
   ```
   (A) Open a file and write a float to it.
   (B) Open a file and write a string to it.
   (C) Open a file and read an integer from it.
   (D) Open a file and write an integer to it.
   (E) Raise an Error.
   **ANS: E**

30. If a try block contains code dealing with files, you should have a specific except statement to handle:
(A) Syntax Errors
(B) IO Errors
(C) IndexOutOfBoundsException Errors
(D) All possible python errors
(E) All of the above

ANS: B

31. Which of the following string methods can be used to determine if a string contains only newline characters?
(A) ischar()
(B) isalpha()
(C) istab()
(D) isspace()
(E) none of the above

ANS: D

32. The last index in a list \( l \) is ...
(A) 15
(B) len(l)
(C) l.last()
(D) -1
(E) none of the above

ANS: D

33. What will be assigned to \( s_{\text{string}} \) after the execution of the following code?
\[ \text{special} = '1357 Country Ln.' \]
\[ s_{\text{string}} = \text{special}[-3:] \]
(A) `531`
(B) `Ln.`
(C) ` L.n.`
(D) `7531`
(E) none of the above.

ANS: B

34. To store data such as a two-dimensional matrix of integers, you would use
(A) nested lists
(B) the matrix data type
(C) lots of individual integers
(D) all of the above
(E) none of the above

ANS: A

35. What type of file access jumps directly to any piece of data in a file without reading the data that came before it?
(A) Sequential
(B) Random
(C) Number
(D) Text
(E) No files allow this functionality
ANS: B

36. A _____ is a 'holding section' in memory that the systems write data to before writing data to a file.
   (A) variable
   (B) temporary file
   (C) buffer
   (D) virtual file
   (E) none of the above
ANS: C

37. What is the value of l after line 2?
   [1]list = [0, 1, 2, 3, 4]
   [2]list = list * 3
   (A) [0, 1, 8, 27, 64]
   (B) [3, 4, 5, 6, 7]
   (C) [0, 3, 6, 9, 12]
   (D) [0, 1, 2, 3, 4, 0, 1, 2, 3, 4, 0, 1, 2, 3, 4]
   (E) none of the above
ANS: D

38. Which is a syntactically correct way to create a list?
   (A) l = []
   (B) l = list.create()
   (C) l = [0] * 5
   (D) l = ""
   (E) A & C
ANS: E

39. Which of the following returns a copy of the string with all leading and trailing whitespace characters removed?
   (A) strip()
   (B) lstrip()
   (C) remove()
   (D) lremove()
   (E) rremove()
ANS: A
40. Which of the following is not a list?
   (A) [1, 2, 3, 4]
   (B) ['NewYork', 'Orlando']
   (C) (1, 2, 3, 4, 12)
   (D) [[12, 4], [8, 15]]
   (E) They are all lists.

   **ANS: C**

41. What is the output of the following code:

   ```python
   numbers = [1, 2, 3, 4, 5]
   my_list = [numbers[2], numbers[4]]
   print(my_list)
   ```

   (A) [2, 4]
   (B) [numbers[2], numbers[4]]
   (C) [3, 5]
   (D) Index out of bounds error
   (E) Syntax error

   **ANS: C**

42. A drawback for the writelines method is that it ...

   (A) Automatically write a newline.
   (B) Always writes a newline.
   (C) Doesn’t save the file.
   (D) Write each line.
   (E) Only writes a single line.

   **ANS: E**

43. You can perform the following tasks with lists except ...

   (A) reverse the list
   (B) append to a list
   (C) sort a list in descending order
   (D) sort a list in ascending order
   (E) none of the above

   **ANS: E**

44. Built-in list methods include...

   (A) Append
   (B) Delete
   (C) Index
   (D) A & C
   (E) None of the above

   **ANS: D**
45. How would you replace the 5th item of a list $l$ with the int 93?

(A) $l\text{.insert}(5, 93)$
(B) $l\text{.insert}(4, 93)$
(C) $l[93] = 5$
(D) $l = [5, 93]$
(E) $l[5] = 93$

**ANS: E**

46. Which function inserts items into a list at a specified index?

(A) $l\text{.append}(\text{item})$
(B) $\text{item}[::-1]$
(C) $\text{item}[\text{index}]$
(D) $\text{insert}(\text{item})$
(E) $l\text{.insert}(\text{item}, \text{index})$

**ANS: E**

47. How do you reverse a string?

(A) $\text{string} = \text{string}[:: -1]$
(B) $\text{string.reverse}()$
(C) $\text{string} = \text{string}[; ; -1]$
(D) $\text{string.backward}()$
(E) $\text{string} = \text{string}[-1]$

**ANS: A**

48. This statement saves length of a string $s$ into variable $t$.

(A) $t = \text{lengthOf}(s)$
(B) $t = s.\text{length}()$
(C) $t = \text{len}(s)$
(D) $t = s.\text{len}()$
(E) $t = s.\text{lengthOf}()$

**ANS: C**

49. Which of the following tools are not supported by tuples?

(A) indexing
(B) in operator
(C) iterating
(D) += operator
(E) All of these tools are supported.

**ANS: D**

50. Why would you use a counter variable?

(A) To keep count of how many times a loop runs.
(B) To keep track of how many times you find a certain condition.
(C) To record how many lines there are in a file.
(D) To determine the total number of wins in a rock, paper, scissors program.
(E) All of the above.

ANS: E