Questions

1. True/False   The following code evaluates to True:

\[(5 = 3) \text{ and True or True or False and } (6/7 == 1)\]

2. True/False   A Boolean expression can only evaluate to either True or False

3. Which of the following evaluate to True?
   
   A. \[4 < 3 \text{ and } 6 == 6\]
   B. \[9 \% (5 \div 1)) < 6 \text{ or } 4 ** 2 == 7 % 1\]
   C. \[(7**2) \div (51 \% 11) > 5 \% 2 \text{ and } (3**6) != 4\]
   D. \[(12 \div 4) * 3 > 8 \text{ and } (11 \% 6) + 7 >= 17\]

4. True/False   A dictionary of Python’s mapping type

5. True/False   Concatenating a list adds on to the end of an existing list

6. What is printed when the following code is executed:

```python
myFood = {"apple":4, "banana":7, "cinnamon roll":2, "sandwich":3, "lollipops":13}
sumFood = 0
for x in myFood.values():
    sumFood = x + sumFood
print(str(sumFood))
```

   B. 29
   D. Error
   E. Nothing

7. True/False   The portion of code that is indented on the line after the colon is the Code Block

8. True/False   Closing an opened file does not affect the available resources of the computer where the program is running.
9. True/False  The below three `print` statements print the same thing to the screen

```python
print("Hello my name is bob")
print("Hello","my","name","is","bob")
print("Hello "+"my "+"name "+"is "+"bob")
```

10. What will the below code print to the screen?

```python
var = "Hello World!!"
 aVar = var[4:12]
print(aNewVar, var[0:5])
```

11. What would the following print to the screen?

```python
aList = [1, 2, 3]
theSameList = aList
aList[:] = ["hello", "hi", "how are you?"]
print (theSameList)
```

   A. [1, 2, 3]
   B. ['hello', 'hi', 'how are you?']
   C. ERROR
   D. Nothing

12. What are 4 python turtle functions such as, but not including, `turtle.up`

13. The following code evaluates to True

```python
26//5**1**(4-2) == 1
```

14. What does the following code print?

```python
aList = [13, 55, "snail", [87, 56, "dog"], False, 2.17, "18"]
print(len(aList))
```

   A. 7
   B. 8
   C. 9
   D. Error

15. When is the + operator evaluated as an addition operator?
16. What does the below code print to the screen:

```python
toyStory = "There's a snake in my boot!"
if "snakes" in toyStory:
    print("Wake me up inside, save me."")
print(toyStory[:10] + toyStory[-5:-1] + toyStory[15:21] +
      toyStory[-18:-12] + toyStory[-1])
```

17. What will the following code print to the screen?

```python
print("And the Oscar goes to.....")
print(oscarNominees[0:1])
```

18. True/False Any for lop can be rewritten as a while loop

19. What does the below code print to the screen?

```python
string= "Monday"
string=string[1:5]
newString=string*3
print(newString[1:5])
```

20. Which of the following are valid forms of the * operator

A. string * integer
B. string * float
C. integer * integer
D. float * integer
E. string * string

21. True/False The below code will print False to the screen

```python
a = [“applesauce”, 12, 3.432]
b = a
print(a is b)
```

22. True/False The following is a valid (does not generate an error) type conversion

```python
int(float(str(23)))
```

23. Given an example of a nested conditional statement.

24. What does the `deepcopy()` function accomplish?
25. True/False If two list variables point to objects that have the same elements, then the list variables refer to the same list objects.

26. Identify the syntax errors in the below code

```python
areaCodes = ["602", "480", "520", "928"
areaCodes.append"623"
for x in range (0, len(areaCodes))
    print(areaCodes[x]
```

27. True/False The output of the below code is **was**

```python
str = "How the west was won"
print((str.split())[-3])
```

28. For the code below

```python
sampleList = ["Western", [60,99], 5.0, "STUDY"]
```

A. What is the length of `sampleList`
B. What is the value of `sampleList[-2]`
C. What is the value of `sampleList[1]`

29. True/False A function can invoke another function

30. How do you do a carriage return in a print statement?

31. True/False The function `append()` adds a string to a previously declared string.

32. In the below code insert parentheses so that the code prints 18

```python
print( 14 % 3 * 8 + 7 - 5 + 7 // 3 + 4 ** 2 )
```

33. The below code is syntactically valid

```python
myVar = "var" + 8
print(myVar)
34. Locate all errors in the below code:

```python
def myAwesomeFunction:
    myVar = 3
    myString = "Wut Wut"
    output = myVar*myString
    x = int(input("How many times?")
    for y in range(0, x)
        print(output)
```

35. What does the below code print to the screen?

```python
list1 = ["Yellow", "Red", "Green"]
list2 = [1, 2, 3]
print(list1[0:], list1[0][3])
print(list2[:], list2[1:5])
```

36. Which of the following print False? Select all correct choices.

A. print(False)
B. print(7 / 7 + 1 – 8 ** (1/3) == 95 % 5 )
C. print("False")
D. print("True" == True)
E. False

37. What does the below code print to the screen?

```python
aList = ["Kangaroo", "Koala", "Tasmanian Devil"]
newList = aList + ["Great White Shark", "Lionfish", "Dolphin"]
print(newList)
```

38. What does the following expression evaluate to:

```
4 * (5 // 9 + 3 ** 2) - 7 ** 2
```

39. Write a function that returns the number of digits in an integer.

40. True/False You can modify an existing string by using a string method, such as .capitalize()

41. Explain the difference between the following two lines of code:

```python
aList = anotherList
aList is anotherList
```
42. What does the below code print to the screen:

```python
myList = ["y", "G", [23.1, 25.4], "l", "o", ["T","r","u","e"], 10]
del myList[2:4]
del myList [-1]
print(myList[1], myList[3][1], myList[3][3], myList[0], sep='')
```

43. Write code that finds all string elements in a list and its sublists, concatenates them, and prints them. At most 1 level of sublists is allowed).

44. What is the output of the following code:

```python
MyList = ["red","blue",114,
        "purple","yellow",
        "pie",13,"cake",45,True]
for x in range(0,10,2):
    if(x < 6):
        print(MyList[x])
    else:
        print(MyList[x+1])
```

45. For the below code, the three lines printed are identical.

```python
appleList1=list("apples")
appleList2=["a","p","p","l","e","s"]
appleList3=[]
for aChar in "apples":
    appleList3=appleList3+[aChar]
print(appleList1)
print(appleList2)
print(appleList3)
```

46. Function definitions do not alter the flow of execution of a program, but statements inside the function are not executed until the function is called.

47. True/False    The two variables aStr and aStr2 point to different objects

```python
aStr = "hello"
aStr2 = "hello"
```
Answers

1. False
2. True
3. B, C
4. True
5. False
6. B
7. True
8. False – closing an opened file does free up computer resources because there are no longer any active pointers going to the file.
9. True
10. o World! Hello
11. B
12. forward, left, right, Turtle
13. False, because when multiple ** operators are involved, they are evaluated right-to-left
14. D, because a closing parenthesis is missing at the end of the print statement
15. When the two operands are numbers
16. There’s a boot in my snake!
17. ['Leonardo']
18. True
19. ndao
20. A, C, D
21. False
22. True
23.
   if x>y:
       print("You win!!")
   else:
       if x==y:
           print("You tie!")
       else:
           print("You lose")

24. It copies all elements of a list including sublists
25. False; two different list objects can have elements that are the same
26. First line is missing ], second line append should have (), third line is missing a colon, and fourth line is missing a closing parentheses
27. False
28. A : 4, B : 5.0, C : [60,99]
29. True
30. You place \n inside the quote marks of the print statement. \n is the special character that specifies new line
31. False. append adds an item to a list.
32. print (((14 % 3) * 8 + 7) – 5 + 7 //( (3 + (4 ** 2)) ))
33. False. The + operand does not work when one operand is a string and the other an integer.
34. Missing parentheses after the function def. Missing quotes in the input line for x. Missing a colon on the for loop. Missing a parenthesis on the input as well.

35.

['Yellow', 'Red', 'Green'] 1
[1,2,3][2,3]

36. A,C,D

37. ['Kangaroo', 'Koala', 'Tasmanian Devil', 'Great White Shark', 'Lionfish', 'Dolphin']

38. -13

39.

def numDigits(aNum):
aNumStr = str(aNum)
lenNumStr = len(aNumStr)
return lenNumStr

40. False. Strings are immutable and their values cannot be changed.

41. The first line is aliasing, while the second line is a Boolean statement

42. Grey

43.

string = ''
for item in myList:
    if type(item) is str:
        string += item
    elif type(item) is list:
        for subItem in item:
            if type(subItem) is str:
                string += subItem

print (string)

44.

red
114
yellow
cake
True

45. True

46. True

47. False, because strings are immutable, and Python keeps only a single copy of a string, and multiple variables can refer to it.