Quarter 3 Super Grade Killer Quiz Name:_____

1. Choose correct output of the following code.

```
dogs = ['Fido', 'Princess', 'Spike', 'Frank']
for dog in dogs:
   if len(dog) > 5:
      print dog, 'is the winner!'
```

A. Princess is the winner!
B. Fido is the winner!
C. None
D. dog 8, is the winner!

2. Choose correct output of the following code.

```
for i in range(3, 21, 3):
    print i,
```

A. 3 6 9 12 15 18
B. 3 6 9 12 15 18 21
C. 3 9 15 21
D. 3 4 5 6 7 8 9

3. Choose correct output of the following code.

```
scores = [20, 20, 0, 0, 20, 0, 0, 20]
total = 0
for score in scores:
    total += score
num = len(scores)
mean = total/num

if mean > 10:
   print "You passed. Average: "+str(mean)
else:
   print "You failed. Average: "+str(mean)
```

A. You passed. Average: 10
B. You failed. Average: 10
C. You passed. Average: 8
D. You failed. Average: 8

4. Choose correct output of the following code.

```
factorial = 1
for f in range(1,5):
    factorial *= f
print factorial
```

A. 5
B. 15
C. 24
D. 120

5. Choose correct output of the following code.

```
alphabet="ABCDEFGHIJKMNOPQRSTUVWXYZ"
if 'L' in alphabet:
    print "Jingle Bells"
else:
    print "Noel"
```

A. Jingle Bells
B. Noel
C. ABCDEFGHIJKLMNOPQRSTUVWXYZ
D. None

6. Choose correct output of the following code.

```
roots = [1, 2, 3, 4, 5, 6, 7]
for root in roots:
    if root == 7 or (root < 4 and root > 2):
        print "The square root of", root**2, "is", root
```

A. The square root of 9 is 3
   The square root of 49 is 7
B. The square root of 4 is 2
   The square root of 16 is 4
C. The square root of 4 is 2
   The square root of 9 is 3
   The square root of 16 is 4
   The square root of 25 is 5
D. The square root of 49 is 7

7. Choose correct output of the following code.

```
consonents = "YJSPCR"
for letter in consonents:
    print letter+"am",
print consonents[2:4]+"am"
```

A. YJSPCRam
B. am am am am am am
C.  CRam
D. Yam Jam Sam Pam Cam Ram SPam

8. Choose correct output of the following code.

```
numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14]
i = 0
while i < len(numbers):
    if numbers[i] % 7 == 0:
        print "Win",
    i += 1
```

A. Win
B. Win Win
C. Win Win Win
D. Win Win Win Win Win Win Win Win Win Win Win Win Win

9. Choose correct output of the following code.

```
countries = ["US", "Spain", "UK", "Finland", "Uganda"]
countries.append("Canada")
countries.append("Uruguay")
countries.append("Brazil")
for country in countries[0::2]:
    print country,
```

A. US UK Uganda Uruguay
B. Spain Finland Canada Brazil
C. country country country
D. US Spain UK

10. Choose correct output of the following code.

```
def mean(scores):
    total = sum(scores)
    count = len(scores)
    average = total/count
    if average < 50:
        return "FAIL"
    return average

test_scores = [100, 50, 90, 80, 70]
print "Average score: ", mean(test_scores)
```

A. Average score: FAIL
B. Average score: 80
C. Average score:  78
D. Error

11. What is wrong with this code?

```
def add_all(numbers):
    total = 0
    for number in numbers:
        total += number
    return total

numbers = [5, 5, 5, 5, 5]
add_all(numbers)
print total
```

A. Syntax Error, missing colon
B. Syntax Error, total variable out of scope
C. Logic Error, prints the wrong number
D. Runtime Error, dividing by zero

12. Which import statement is NOT correct?
A. import * from math
B. import math
C. from turtle import *
D. import math, turtle

13. What data type is best for storing a person's age?
A. Integer
B. String
C. Float
D. Boolean

14. What data type is best for storing a student's grade point average?
A. Integer
B. String
C. Float
D. Boolean

15. What data type is best for storing a customer's name?
A. Integer
B. String
C. Float
D. Boolean

16. Which one of the following is a valid name (or identifier) for a variable?
A. apple$
B. _bunches_of_bananas
C. grape vine
D. 6erries

17. What is the output of the following code?

```
def pythagorean_theorem(a, b):
    # This function will calculate the
    # Hypotenuse of a right triangle
    #
    # a^2 + b^2 = c^2
    # a2 = a**2
    # b2 = b**2
    # c = sqrt(a2+b2)
    # print c
    pass
pythagorean_theorem(3,4)
```

A. 5
B. Error, no sqrt function defined
C. 25
D. Nothing, function comments skipped

18. What type of error allows a program to run, but an operation crashes the program?
A. Syntax Error
B. Logic Error
C. Run-time Error
D. Compiler Error

19. What type of error prevents a program from running at all?
A. Syntax Error
B. Logic Error
C. Run-time Error
D. Linking Error

20. Which function call opens a file for writing? (bonus)
A. file = open(‘customers.txt’, ‘w’)
B. file = open(‘customers.txt’)
C. file = open(‘customers.txt’, ‘r’)
D. file = open(‘w’, ‘customers.txt’)

21. Which function will convert the string ‘234’ to an number?
A. int()
B. str()
C. chr()
D. len()

22. Which function will convert a number to a string?
A. int()
B. str()
C. chr()
D. len()

23. Which function will give the number of items in a list or the number of letters in a string?
A. int()
B. str()
C. chr()
D. len()

24. Which operator will divide the first number by the second number and return the remainder?
A. **
B. %
C. +=
D. !=

25. What is the output of the following code?

```
def shower_today(smelly, hotwater):
    if not hotwater and not smelly:
        return False
    #don't forget to use soap
    return True

print "Should I shower today?", shower_today(True, False)
```

A. Should I shower today? False
B. Should I shower today? True
C. Nothing
D. Should I shower today?

26. Convert 128 from decimal to binary.
A. 1000 0000
B. 100 0000
C. 10 0000
D. 111 1111

27. Convert 1010 1010 from binary to decimal.
A. 115
B. 203
C. 170
D. 298

28. What is the output of the following code?

```
total = 0
for i in range(100):
    num = i / 100
    total += num
print total
```

A. 49.5
B. 100
C. total
D. 0

29. What is the output of the following code?

```
print 1/2 + 2/1
```

A. 2.5
B. 2
C. 0
D. 3

30. What is the python keyword for defining code that creates an object?
A. dot
B. parenthesis
C. class
D. assignment

31. What powerful little operator is used for accessing the data members and member functions of an object?
A. dot
B. parenthesis
C. class
D. assignment

32. What is the name of the function that is automatically called when an object is created?
A. __init__
B. __start__
C. __str__
D. main

33. Convert the binary number 00101011 into a base 10 (decimal) number?
A. 3
B. 43
C. 38
D. 21

34. What line numbers define member functions of the Dog class?

```
1  class Dog:
2      breed = "Collie"
3      def __init__(self, color="brown", size="medium", age=1):
4          self.color = color
5          self.size = size
6          self.age = age
7
8      def bark(self, sound):
9          return sound*5
10
11     def setBreed(self, breed):
12         self.breed = breed
13
14     fido = Dog()
15     princess = Dog("Poodle")
16     rex = Dog("Pitbull", "spots", "big", 11)
17     print fido.bark("woof")
```

A. lines 2 and 3
B. lines 14-16
C. lines 8 and 11
D. line 1

35. What line numbers create instances of the Dog object?

```
1  class Dog:
2      breed = "Collie"
3      def __init__(self, color="brown", size="medium", age=1):
4          self.color = color
5          self.size = size
6          self.age = age
7
8      def bark(self, sound):
9          return sound*5
10
11     def setBreed(self, breed):
12         self.breed = breed
13
14     fido = Dog()
15     princess = Dog("Poodle")
16     rex = Dog("Pitbull", "spots", "big", 11)
17     print fido.bark("woof")
```

A. lines 2 and 3
B. lines 14-16
C. lines 8 and 11
D. line 1

36. Define and describe Object Oriented Programming (OOP)

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1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
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