Python Exam 1

Question 1 - Evaluate the expression below.

```
4 % 3 / 8 + 7 * 2 - 9
```

a. 5
b. 4
c. 2
d. 0
e. None of the above

Question 2 - Which one of the following isn't matched up with the correct output?

```
def wut(arg):
  if arg:
    return "truthy"
  else:
    return "falsy"
```

a. `wut(0)` //returns "falsy"

b. `wut("hello")` //returns "truthy"

c. `wut(-4)` //returns "falsy"

d. `wut("")` //returns "falsy"

e. `wut(True)` //returns "truthy"

Question 3 - Which of the following conversions would work?

a. `int(7.3)`

b. `float("hello")`

c. `str(123)`

d. a & c

e. a & b

Question 4 - What gets printed from running the code below?

```
def doWork():
  x = 0
  while x < 100:
    if x == "17":
      return "done early"
  return "finished"

print doWork()
```

a. `"done early"`

b. `"finished"`

c. `None`

d. None of the above

Question 5 - What does python use to group commands inside of a function, loop, or if/else block?

a. ()

b. []

c. new lines

d. {}

e. none of the above

Question 6 - What gets printed from running the code below?

```
def someFunction(word):
  idx = 0
```

```
    output = ""
    while idx < len(word):
      if idx % 3 == 0:
        output = output + word[idx].upper()
      else:
        output = output + word[idx].lower()
      idx = idx + 1
    return output

  print someFunction("hello world")
```

a. `"HelLo WorLd"`

b. `"Hello World"`

c. `"HeLlO WoRlD"`

d. `"hElLo wOrLd"`

e. None of the above

Question 7 - Given the function definition below, what is stored in `egg` when you run the command: `egg = chicken(chicken(chicken(8)))`?

```
def chicken(food):
  if food % 2 == 0:
    return food + 1
  elif food > 5:
    return food  / 3
  else:
    return food / 2
```

a. 0

b. 1

c. 2

d. 3

e. None of the above

Question 8 - Given the function definition below, what is stored in `powerOfTwo` when you run the command: `powerOfTwo = raiseTwo()`?

```
def raiseTwo():
  x = 3
  output = 2
  while x < 20:
    output = output * 2
    x = x + 2
  return output
```

a. 256

b. 512

c. 1024

d. 2048

e. None of the above

Question 9 - How many times will the code below print `poke`?

```
annoy = 26
while annoy > 12:
  print "poke"
  annoy = annoy - 3
```

a. 4

b. 5

c. 6

d. 7

e. None of the above

Question 10 - What gets printed when the code below is run?

```
def mysteryFunction(num):
  output = 0
  while num > 0:
    output = output + num % 10 * 2
    num = num / 10
  return output

print mysteryFunction(2143)
```

a. 7

b. 10

c. 18

d. 20

e. None of the above

Question 11 - What does the function `highFive()` return?

```
def highFive():
  x = 5
  if x >= 5:
    x = x + 5
  if x >= 10:
    x = x + 5
  if x >= 15:
    x = x + 5
  return x
```

a. 5

b. 10

c. 15

d. 20

e. None of the above

Question 12 - What gets printed by running the code below?

```
def isPythagoreanTriple(a, b, c):
  a ** 2 + b ** 2 == c ** 2

print isPythagoreanTriple(3, 4, 5)
```

a. True

b. False

c. 0

d. None

Question 13a

Write a function `mySymbol` that receives one character in the form of a string. It should return `True` if the character is one of the following 10 symbols: `!`, `@`, `#`, `$`, `%`, `^`, `&`, `*`, `(`, `)` and `False` if the character is not a character within this group of 10. You must use a `while` loop.

```
mySymbol("8") #returns False
mySymbol("h") #returns False
mySymbol("!") #returns True
```

Question 13b

Write a function `myDigit` that receives one character in the form of a string. It should return `True` if the character is a numerical digit and `False` if the character is not. You must use a `while` loop.

```
myDigit("8") #returns True
myDigit("h") #returns False
myDigit("!") #returns False
```

Question 14a

Write a function `madeOfSymbols` that receives a string. It'll return `True` if the string has at least 3 of the following symbol characters: `!`, `@`, `#`, `$`, `%`, `^`, `&`, `*`, `(`, `)`. It'll return `False` otherwise. You must use a `while` loop and the `mySymbol` function you wrote in the previous

problem.

```
madeOfSymbols("h3ll0") #returns False
madeOfSymbols("*@%^!$") #returns True
madeOfSymbols(")(#3209") #returns True
madeOfSymbols("hola!!") #returns False
```

Question 14b

Write a function `madeOfDigits` that receives a string. It'll return `True` if the string is made of all numbers. It'll return `False` otherwise. You must use a `while` loop and the `myDigit` function you wrote in the previous problem.

```
madeOfDigits("h3ll0") #returns False
madeOfDigits("*@%^!$") #returns False
madeOfDigits(")(#3209") #returns False
madeOfDigits("35918") #returns True
```