Computer Science
110

# Quiz 3    need 10 answers for 50XP

Directions: Each question is worth 5 points (80 total possible points). For the individual portion of the quiz, you mark your answer with a number. For each question you have four points to distribute. For example, you can write a '5' on a particular answer indicating that answer will be worth five points;  you can give 3 point to one answer and 2 to another, etc. Split points must add up to five points. You will be given the number of points marked next to the correct answer. For the team portion of the quiz, the score for each answer is computed as follows:

| 1 scratch | 2 scratches | 3 scratches | 4 scratches |
|-----------|-------------|-------------|-------------|
| 5 points | 2 point | 1  point | ½  points |

Multiple choice (Choose the **best** answer among the alternatives)

1) What is returned when I run:
   `letters('Mississippi')`

   a)    `Mississippi`
   b)    `11`
   c)    `{'i': 4, 'p': 2, 's': 4, 'M': 1}`
   d)    `['M', 'i', 's', 's', 'i', 's', 's', 'i', 'p', 'p', 'i']`
   e)    `None`

2) What is returned when I run:
   `nog("I had an apricot poodle. Now I have a chocolate poodle and a red poodle")`

   a) 3
   b) 7
   c) 15
   d) 0
   e) 4

3) What is returned when I run:
   `dog("I had an apricot poodle. Now I have a chocolate poodle and a red poodle")`

   a) 7
   b) 15
   c) 3
   d) 0
   e) 4

4) What is returned when I run :
   foo('It was a dark and stormy night')

   a)    0
   b)    1
   c)    2
   d)    3
   e)    4


5) What is returned when I run :
   bar('It was a dark and stormy night')

   a)    4
   b)    0
   c)    1
   d)    2
   e)    an error is produced


6) What is returned when I run :
   ralph('It was a dark and stormy night')

   a)    0
   b)    1
   c)    2
   d)    3
   e)    an error is produced


7) What is returned when I run :
   prettygood('It was a dark and stormy night')

   a)    an error is produced
   b)    0
   c)    1
   d)    2
   e)    3

8)   What is returned when I run

   ridderhof('gross national happiness')

   a) 'grossnationalhappiness'
   b) 'gross national happiness'
   c) 'happiness national gross'
   d) 'ssenippah lanoitan ssorg'
   e) 'gross gross national national happiness happiness'

9) What is printed when I run

crumpler('The Nuclear Energy Committee')

a)   28
b)   u e a E e y o i e e
c)   The Nuclear Energy Committee
d)   4
e)   TNEC


10) What is returned when I run:
natadaka('weed')


a)   weed
b)   4
c)   0
d)   8
e)   ee


11) What does m3([1, 2, 3]) return?


a)   14
b)   17
c)   [1, 4, 9]
d)   [2, 5, 10]
e)   [1, 2, 3]


12) What does m4[1, 2, 3]) return?

a)   14
b)   17
c)   [1, 4, 9]
d)   [2, 5, 10]
e)   [1, 2, 3]

13) What is giveme(.41) ?

a) 4.1
b) 40
c) 4
d) 41
e) 8

14) In worse case the running time of Bubble Sort is
a) $O(\log n)$
b) $O(n^2)$
c) $O(n)$
d) $O(n \log n)$
e) $O(n^3)$

15) In worse case, the running time of finding an item in an unsorted list is
a) $O(\log n)$
b) $O(n^2)$
c) $O(n)$
d) $O(n \log n)$
e) $O(n^3)$

16) What is returned by delta(4)?

a) 0
b) 1
c) 3
d) 10
e) 15

#quiz3

```python
def letters(text):
    total = 0
    for ch in text:
        total += 1
    return(total)


def nog(text):
    total = 0
    for x in text.split():
        total += 1
    return(total)


def dog(text):
    total = 0
    for x in text.split():
        if x == 'poodle':
            total += 1
    return(total)


def foo(text):
    total = 0
    for x in text.split():
        if x == 'a':
            total += 1
    return(total)


def bar(text):
    total = 0
    for x in text:
        if x == 'a':
            total += 1
    return(total)


def ralph(text):
    # different from bar in that
    # indent of return different
    total = 0
    for x in text:
        if x == 'a':
            total += 1
        return(total)


def prettygood(text):
    # different return indent
    #
    total = 0
    for x in text:
        if x == 'a':
            total += 1
            return(total)
```

```python
def ridderhof(text):
    result = ''
    i = len(text) - 1
    while i >= 0:
        result += text[i]
        i -= 1
    return result


def crumpler(text):
    result = ''
    for pho in text.split():
        result += pho[0]
    return(result)


def m1(x):
 return(x * x)

def m2(x):
 return(m1(x) + 1)

def m3(numList):
 m = 0
    for n in numList:
        m += m1(n)
    return(m)

def m4(numList):
    m = 0
    for n in numList:
        m += m2(n)
    return(m)
```

```python
def natadaka(text):
    score = 0
    for ch in text:
        if ch in 'ae':
            scrabbleValue = 1
        elif ch == 'd':
            scrabbleValue = 2
        elif ch == 'w':
            scrabbleValue = 4
        score += scrabbleValue
    return score


def giveme(num):
    """num is a float"""
    number = round(num * 100)
    total = number // 25
    number = number % 25
    total += number // 10
    number = number % 10
    total += number // 5
    number = number % 5
    total += number
    return(total)


def delta(n):
    if n == 0:
        return(0)
    else:
        return(n + delta(n - 1))
```