1. What is the result of the expression 35%6?
   a. 1 b. 5 c. 3 d. 7
2. Which of the following contains a function call?

```
(I)      "HENLO".lower()
(II)     def myFunction(x):
               return x
(III)    print("HENLO")
```

   a. (I), (II) and (III)
   b. (I) and (II)
   c. (I) and (III)
   d. (II) and (III)
   e. Only (I)
3. What does the following Python program print?

```
s = "abcdefgh"
x = "a"
while x in s:
     s = s[:len(s) - 1]
     print(x, end = " ")
```

   a. Nothing
   b. Crashes
   c. a b c d e f g h
   d. a a a a a a a a
   e. b c d e f g h
4. What does the following program do?

```
def myFunction(L):
     p = 0
     for i in range(1, len(L)):
          if L[i] >= L[p]:
               p = i
     return p
```

   a. The max integer in the list L
   b. The smallest integer in L
   c. The position (i.e. index) of the smallest value in L, if there are multiple occurrences it returns the first position it was found at
   d. The position (i.e. index) of the mas value in L, if there are multiple occurrences it returns the first position it was found at
   e. The position (i.e. index) of the max value in L, if there are multiple occurrences it returns the last position it was found at

5. What does the following program print?

```
class myClassA:
      def __init__(self):
            self.x = 0
            self.y = 0
class myClassB(myClassA):
      def display(self):
            print(self.x, self.y)

obj = myClassB()
obj.display()
```

   a. Nothing
   b. 0 0
   c. 1 1
   d. Nothing. Prints an error message (TypeError: __inti__() missing 1 required positional argument)
   e. Nothing. Prints an error message (AttributeError: ‘myClassB’ object has no attribute ‘x’)

6. The Fibonacci series is a series of numbers where each term is the sum of the two precedent terms. For example, the first 10 Fibonacci numbers are: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89
   Which of the following statements are correct regarding the following function

```
def myFibList(n):
      ```(int) -> list
      Precondition: n is not negative
      Returns a list containing the first n terms in the Fibonaci
      series.```
if n == 0:
      return [0]
elif n == 1:
      return [0, 1]
l = [0, 1]
for i in range(2, n+1):
      l.append(l[i-1] + l[i-2])
return l
```

   a. This function is correct. It returns the list of the first n terms in the Fibonacci series
   b. The function is incorrect. It can be corrected by replacing the last line with `return myFibList(n-1)`
   c. This function is incorrect. It can be correct by replacing `for i in range(2, n+1)` by `for i in range(2, n+1, 2):`
   d. This function is incorrect. It can be fixed by replacing the last line by `return [len(l) - 1]`
   e. This function is wrong since it does not use recursion

7. Assume a class Thing has a method doSmg with the following signature:

```
class Thing():
      def doSmg(self, a, b):
            …
```

   Suppose you have a variable *henlo* that references an object of type *Thing* and that *hen1* and *hen2* are two other variables initialized to a value. How would the method *doSmg()* be invoked?

   a. henlo.doSmg(hen1, hen2)
   b. thing.doSmg(hen1, hen2)
   c. self.doSmg(hen1, hen2)
   d. doSmg(henlo, hen1, hen2)
```

8. How many times with the letter A be printed?

```
def ouf(n):
      for i in range(n):
            if i % 8 == 0:
                  print("A"*i)
ouf(11)
```

   a. 2
   b. 3
   c. 8
   d. 26
   e. 27

9. For the following function what is the approximated runtime?

```
def myBigOh(lst):
      ```(list of int) -> None```
      n = len(lst)
      for i in range(n):
            print(lst[i])
```

   a. $O(\log_2 n)$
   b. $O(n)$
   c. $O(n\log_2 n)$
   d. $O(n^2)$
   e. $O(n^3$

10. What is the runtime of the following function in terms of big-Oh?

```
def myBigOhNo(lst):
      ```(list of int) -> None```
      n = len(lst)
      for i in range(n*n*n):
            for j in range(i//2):
                  lst[i] = lst[j]
```

   a. $O(1)$
   b. $O(n)$
   c. $O(n^3\log_2 n)$
   d. $O(n^3)$
   e. $O(n^6)$

11. Consider the following class Point:

```
class Point(object):
      def __init__(self, xcoord = 0, ycoord = 0):
            self.x = xcoord
            self.y = ycoord
      def display_point(self):
            return "Horizontal coord.: " + str(self.x) + ";
Vertical Coord. " + str(self.y)

point8 = Point(5)
print(point8.display_point())
```

What will this print?

a. Horizontal coord. 5; Vertical coord. 0
b. Horizontal coord. 5; Vertical coord. 5
c. Horizontal coord. 0; Vertical coord. 0
d. Error will occur
e. None of the above

https://bit.ly/2EnDTzx

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