

COSC 1437 – Warm Up and Review of COSC 1436 (Python 1)

1. `len('Hello there')` = ____

2. `len('Hello\nthere')` = ____

3. `"Python 2"[2:4]` = ____

4. True or False

a) `"fun" in "functions"` = _____

b) `"fun" in "Functions"` = _____

c) `"Fan" in "Functions" == False` = _____

d) `'New Year'` has the same internal representation as `"New year"`;
i.e., `'New Year' == "New year"` is True

e) Whitespace is meaningful in Python

5. The best structure for implementing a multi-way decision in Python is:

a) If b) if-else c) if-elif-else d) switch

6. What statement can be executed in the body of a loop to cause it to terminate?

a) if b) exit c) continue d) break

7. Assume `name = 'Forest Gump'`.

`name.upper()` = _____

8. If `name = 'Jumbo Jack'`, then:

`name[0]` = _____ `name[4]` = _____ `name[5]` = _____

9. `chr(ord('a') + 1)` = _____

10. What is the output of the following code segment?

```
for c in 'purple cat':  
    print(c, end=' ')
```

11. What is the output of the following code segment?

```
for z in range(3, 5, 1):  
    print(z * z)
```

12. Assume `a = 'Jython Programmers Rule'`.

What is a Python statement (involving the variable `a`) to create a string where the character `'J'` is replaced with a `'P'`?

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13. Assuming `x = "Happy"`, `z = "New"`, and `y = "Year"`, using these variables, write a Python statement that produces the string "Happy New Year".

14. Describe the action of the function below.

```
def foo(s):  
    return (s[0].upper + s[1:].lower())
```

15. What is wrong (or badly designed) for the following function intended to compute the area of a circle?

```
def findArea():  
    radius = 10  
    pi = 3.1459  
    area = pi * radius * radius  
    print(area)
```

16. Describe the action of the function below.

```
def foo(myl):  
    result = 0  
    for elem in myl:  
        result += elem  
    return result
```

17. Name 5 built-in functions in Python

18. True/False questions

- a) Every Python function returns some value.
- b) Information can be passed into a function through parameters.
- c) The Boolean operator `or` returns `True` when both of its operands are true.
- d) `a and (b or c) == (a and b) or (a and c)`
- e) `True or False`

19. A Python function definition begins with

- a) `def`
- b) `define`
- c) `function`
- d) `func`

20. A function with no return statement returns

- a) `nothing`
- b) its parameters
- c) its variables
- d) `None`

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21. Predict the output that would be generated by the following code.

```
a, b, c = 4, 10, 22

if a > b:
    if b < c:
        print("Apple")
    else:
        print("Banana")
elif b > c:
    if a == b:
        print("Cat")
    elif a < b:
        print("Dog")
else:
    print("Elephant")
    if a < c:
        print("Fish")
    if a < b:
        print("Giraffe")
    else:
        print("Hotel")
print("Igloo")
```

22. Predict the output that would be generated by the following code.

```
x = 10
while x > 0:
    x = x - 3
    print(x)
```

23. Predict the output that would be generated by the following program.

```
def myFunction(x, y):
    return x * 2 + y

def main():
    a = 12
    b = 3
    c = myFunction(a, b)
    d = myFunction(1, c)

    print(c)
    print(d)

if __name__ == "__main__":
    main()
```

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24. Predict the output that would be generated by the following code.

```
x = 2
y = 10
for j in range(0, y, x):
    if j % 2 == 0:
        continue
    print("iteration", j)
```

25. What is the output of the following code segment?

```
aList = [1, 2, 3, 4, 5, 6, 7]
pow2 = [2 * x for x in aList]
print(pow2)
```

26. What is the output of the following list operation

```
aList = [10, 20, 30, 40, 50, 60, 70, 80]
print(aList[2:5])
print(aList[:4])
print(aList[3:])
```

27. What is the output of the following list function?

```
sampleList = [10, 20, 30, 40, 50]
sampleList.pop()
print(sampleList)

sampleList.pop(2)
print(sampleList)
```