

# Microsoft

## Exam Questions 98-381

Introduction to Programming Using Python



### NEW QUESTION 1

The ABC company is creating a program that allows customers to log the number of miles biked. The program will send messages based on how many miles the customer logs.

You create the following Python code. Line numbers are included for reference only.

```
01
02     name = input("What is your name? ")
03     return name
04
05     calories = miles * calories_per_mile
06     return calories
07 distance = int(input("How many miles did you bike this week? "))
08 burn_rate = 50
09 biker = get_name()
10 calories_burned = calc_calories(distance, burn_rate)
11 print(biker, ", you burned about" ,calories_burned, "calories.")
12
```

You need to define the two required functions.

Which code segments should you use for line 01 and line 04? Each correct answer presents part of the solution? (Choose two.)

- A. 01 def get\_name():
- B. 01 def get\_name(biker):
- C. 01 def get\_name(name):
- D. 04 def calc\_calories():
- E. 04 def calc\_calories(miles, burn\_rate):
- F. 04 def calc\_calories(miles, calories\_per\_mile):

**Answer:** BE

#### Explanation:

References: <https://www.w3resource.com/python/python-user-defined-functions.php>

### NEW QUESTION 2

#### HOTSPOT

You create a function to calculate the power of a number by using Python. You need to ensure that the function is documented with comments.

You create the following code. Line numbers are included for reference only.

```
01 # The calc_power function calculates exponents
02 # x is the base
03 # y is the exponent
04 # The value of x raised to the y power is returned
05 def calc_power(x, y):
06     comment = "#Return the value"
07     return x**y # raise x to the y power
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

Answer Area

	Yes	No
Lines 01 through 04 will be ignored for syntax checking.	<input type="radio"/>	<input type="radio"/>
The pound sign (#) is optional for lines 02 and 03.	<input type="radio"/>	<input type="radio"/>
The string in line 06 will be interpreted as a comment.	<input type="radio"/>	<input type="radio"/>

- A. Mastered
- B. Not Mastered

**Answer:** A

#### Explanation:

References: <http://www.pythonforbeginners.com/comments/comments-in-python> <https://www.w3resource.com/python/python-string.php>

### NEW QUESTION 3

You are creating a function that manipulates a number. The function has the following requirements:

- ? A float is passed into the function
- ? The function must take the absolute value of the float
- ? Any decimal points after the integer must be removed

Which two math functions should you use? Each correct answer is part of the solution? (Choose two.)

- A. math.fmod(x)
- B. math.frexp(x)
- C. math.floor(x)
- D. math.ceil(x)
- E. math.fabs(x)

**Answer:** DE

**Explanation:**

References: <https://docs.python.org/2/library/math.html#number-theoretic-and-representation-functions>

**NEW QUESTION 4**

You are writing a Python program to automate inventory. Your first task is to read a file of inventory transactions. The file contains sales from the previous day, including the item id, price, and quantity.

The following shows a sample of data from the file:

```
10, 200, 5
20, 100, 1
```

The code must meet the following requirements:

? Each line of the file must be read and printed

? If a blank line is encountered, it must be ignored

? When all lines have been read, the file must be closed

You create the following code. Line numbers are included for reference only.

```
01 inventory = open("inventory.txt", 'r')
02 eof = False
03 while eof == False:
04     line = inventory.readline()
05
06
07     print(line)
08 else:
09     print ("End of file")
10     eof = True
11     inventory.close()
```

Which code should you write for line 05 and line 06?

**A**

```
05 if line != '\n':
06     if line != "":
```

**B**

```
05 if line != '\n':
06     if line != None:
```

**C**

```
05 if line != '':
06     if line != "":
```

**D**

```
05 if line != '':
06     if line != "\n":
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: B**

**NEW QUESTION 5**

DRAG DROP

The ABC company is converting an existing application to Python. You are creating documentation that will be used by several interns who are working on the team.

You need to ensure that arithmetic expressions are coded correctly.

What is the correct order of operations for the six classes of operations ordered from first to last in order of precedence? To answer, move all operations from the list of operations to the answer area and arrange them in the correct order.

## Operations

## Answer Area

Parenthesis

Exponents

And

Multiplication and Division

Addition and Subtraction

Unary positive, negative, not

- A. Mastered
- B. Not Mastered

**Answer:** A

### Explanation:

References: [http://www.mathcs.emory.edu/~valerie/courses/fall10/155/resources/op\\_precedence.html](http://www.mathcs.emory.edu/~valerie/courses/fall10/155/resources/op_precedence.html)

## NEW QUESTION 6

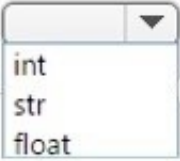
### HOTSPOT


You are an intern for ABC electric cars company. You must create a function that calculates the average velocity of their vehicles on a 1320 foot (1/4 mile) track. The output must be as precise as possible.

How should you complete the code? To answer, select the appropriate code segments in the answer area.

## Answer Area

#Speed calculator

```
distance =  (input("Enter the distance traveled in feet"))

distance_miles = distance/5280 #convert to miles
time =  (input("Enter the time elapsed in seconds"))

time_hours = time/3600 #convert to hours
velocity = distance_miles/time_hours
print("The average velocity is : ", velocity, " miles/hour")
```

- A. Mastered
- B. Not Mastered

**Answer:** A

### Explanation:

References: <https://www.w3resource.com/python/python-data-type.php>

## NEW QUESTION 7

You develop a Python application for your school.

You need to read and write data to a text file. If the file does not exist, it must be created. If the file has content, the content must be removed.

Which code should you use?

- A. open("local\_data", "r")
- B. open("local\_data", "r+")
- C. open("local\_data", "w+")
- D. open("local\_data", "w")

**Answer:** B

### Explanation:

References: <https://pythontips.com/2014/01/15/the-open-function-explained/>

## NEW QUESTION 8

### HOTSPOT

The ABC Video company needs a way to determine the cost that a customer will pay for renting a DVD. The cost is dependent on the time of day the DVD is

returned. However, there are also special rates on Thursdays and Sundays. The fee structure is shown in the following list:

- ? The cost is \$1.59 per night.
- ? If the DVD is returned after 8 PM, the customer will be charged an extra day.
- ? If the video is rented on a Sunday, the customer gets 30% off for as long as they keep the video.
- ? If the video is rented on a Thursday, the customer gets 50% off for as long as they keep the video.

You need to write code to meet the requirements.

How should you complete the code? To answer, select the appropriate code segments in the answer area.

### Answer Area

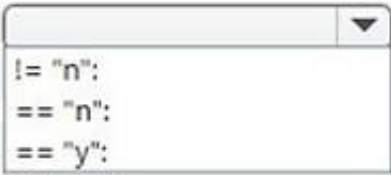
```
# ABC      Video, DVD Rental Calculator


ontime = input("Was video returned before 8 pm? y or n").lower()

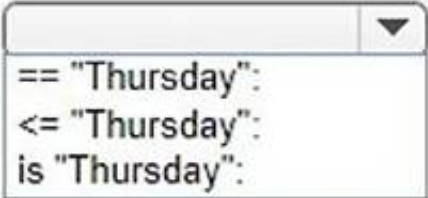
days_rented = int(input("How many days was video rented?"))

day_rented = input("What day was the video rented?").capitalize()

cost_per_day = 1.59

if ontime
    
    days_rented += 1

if day_rented
    
    total = (days_rented * cost_per_day) * .7

elif day_rented
    
    total = (days_rented * cost_per_day) * .5

else:
    total = days_rented * cost_per_day

print("Cost of the DVD rental is : $", total)
```

- A. Mastered
- B. Not Mastered

**Answer:** A

### Explanation:

References:

<https://www.w3resource.com/python/python-operators.php> <https://www.w3resource.com/python/python-if-else-statements.php>

### NEW QUESTION 9

You are creating a function that reads a data file and prints each line of the file. You write the following code. Line numbers are included for reference only.

```
01 import os
02 def read_file(file):
03     line = None
04     if os.path.isfile(file):
05         data = open(file, 'r')
06         while line != '':
07             line = data.readline()
08             print(line)
```

The code attempts to read the file even if the file does not exist. You need to correct the code.

Which three lines have indentation problems? Each correct answer presents part of the solution. (Choose three.)

- A. Line 01
- B. Line 02
- C. Line 03
- D. Line 04



- E. Line 05
- F. Line 06
- G. Line 07
- H. Line 08

Answer: F

NEW QUESTION 10

HOTSPOT

The ABC organics company needs a simple program that their call center will use to enter survey data for a new coffee variety. The program must accept input and return the average rating based on a five-star scale. The output must be rounded to two decimal places. You need to complete the code to meet the requirements. How should you complete the code? To answer, select the appropriate code segments in the answer area. NOTE: Each correct selection is worth one point.

Answer Area

```
sum = count = done = 0
average = 0.0

while (done != -1):

    rating =

    if rating == -1:
        break
    sum+=rating
    count+=1

average = float(sum/count)
```

output("The average star rating for NetVerZleep coffee is: ")  
console.input("The average star rating for the new coffee is: ")  
println("The average star rating for the new coffee is: ")  
print("The average star rating for the new coffee is: ")

+

format(average, '.2f')  
format(average, '.2d')  
{average, '.2f'}  
format.average.{2d}

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

References: <https://www.w3resource.com/python/python-format.php#num>

NEW QUESTION 10

DRAG DROP

You are writing a Python program. The program collects customer data and stores it in a database. The program handles a wide variety of data. You need to ensure that the program handles the data correctly so that it can be stored in the database correctly. Match the data type to the code segment. To answer, drag the appropriate data type from the column on the left to its code segment on the right. Each data type may be used once, more than once, or not at all.

Operations

boolfloatintstr

Answer Area

age = 2

minor = False

name = "Contoso"

weight = 123.5

zip = "81000"

- A. Mastered
- B. Not Mastered

Answer: A

**Explanation:**

References: <https://www.w3resource.com/python/python-data-type.php>

**NEW QUESTION 12**

This question requires that you evaluate the underlined text to determine if it is correct.

You write the following code:

```
import sys
try:
    file_in = open("in.txt", 'r')
    file_out = open("out.txt", 'w+')
except IOError:
    print('cannot open', file_name)
else:
    i = 1
    for line in file_in:
        print(line.rstrip())
        file_out.write("line " + str(i) + ": " + line)
        i = i + 1
    file_in.close()
    file_out.close()
```

The out.txt file does not exist. You run the code. The code will execute without error. Review the underlined text. If it makes the statement correct, select "No change is needed".

If the statement is incorrect, select the answer choice that makes the statement correct.

- A. No change is needed
- B. The code runs, but generates a logic error
- C. The code will generate a runtime error
- D. The code will generate a syntax error

**Answer: D**

**Explanation:**

References: <https://docs.python.org/2/library/exceptions.html>

**NEW QUESTION 13****HOTSPOT**

You are coding a math utility by using Python. You are writing a function to compute roots.

The function must meet the following requirements:

If a is non-negative, return  $a^{1/b}$

If a is negative and even, return "Result is an imaginary number"

If a is negative and odd, return  $-(-a)^{1/b}$

How should you complete the code? To answer, select the appropriate code segments in the answer area.

## Answer Area

```
def safe_root(a, b):
```

```
    if a >= 0:
        if a % 2 == 0:
            else:
                elif:
```

```
        answer = a**(1/b)
```

```
    if a >= 0:
        if a % 2 == 0:
            else:
                elif:
```

```
    if a >= 0:
        if a % 2 == 0:
            else:
                elif:
```

```
        answer = "Result is an imaginary number"
```

```
    if a >= 0:
        if a % 2 == 0:
            else:
                elif:
```

```
    answer = -(-a)**(1/b)
```

```
    return answer
```

- A. Mastered
- B. Not Mastered

**Answer:** A

### Explanation:

References: <https://www.w3resource.com/python/python-if-else-statements.php>

## NEW QUESTION 17

### DRAG DROP

You are creating a Python script to evaluate input and check for upper and lower case.

Which four code segments should you use to develop the solution? To answer, move the appropriate code segment from the list of code segments to the answer area and arrange them in the correct order.

### Code Segments

```
else:
    print(name, "is mixed case.")
```

```
else:
    print(name, "is lower case.")
```

```
name = input("Enter your name: ")
```

```
else:
    print(name, "is upper case.")
```

```
elif name.upper() == name:
    print(name, "is all upper case.")
```

```
if name.lower() == name:
    print(name, "is all lower case.")
```

### Answer Area



- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

References: <https://www.w3resource.com/python/python-while-loop.php>

**NEW QUESTION 20**

**HOTSPOT**

You find errors while evaluating the following code. Line numbers are included for reference only.

```
01 numbers = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
02 index = 0
03 while (index < 10)
04     print(numbers[index])
05
06     if numbers(index) = 6
07         break
08     else :
09         index += 1
```

You need to correct the code at line 03 and line 06.

How should you correct the code? Use the drop-down menus to select the answer choice

that answers each question based on the information presented in the code segment. NOTE: Each correct selection is worth one point.

**Answer Area**

Which code segment should you use at line 03?

while (index < 10) :  
while [index < 10]  
while (index < 5) :  
while [index < 5]

Which code segment should you use at line 06?

if numbers[index] == 6  
if numbers[index] == 6 :  
if numbers(index) = 6 :  
if numbers(index) != 6

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

References: <https://www.w3resource.com/python/python-while-loop.php>

**NEW QUESTION 22**

You are creating a Python program that shows a congratulation message to employees on their service anniversary.

You need to calculate the number of years of service and print a congratulatory message. You have written the following code. Line numbers are included for reference only.

```
01 start = input("How old were you on your start date?")
02 end = input("How old are you today?")
03
```

You need to complete the program.

Which code should you use at line 03?

- A. print("Congratulations on" + (int(end)-int(start)) + "years of service!")
- B. print("Congratulations on" + str(int(end)-int(start)) + "years of service!")
- C. print("Congratulations on" + int(end - start) + "years of service!")
- D. print("Congratulations on" + str(end - start)) + "years of service!"

**Answer:** A

**NEW QUESTION 25**

Evaluate the following Python arithmetic expression:

```
(3*(1+2)**2 - (2**2)*3)
```

What is the result?

- A. 3
- B. 13
- C. 15
- D. 69

**Answer:** C

**Explanation:**

References: [http://www.mathcs.emory.edu/~valerie/courses/fall10/155/resources/op\\_precedence.html](http://www.mathcs.emory.edu/~valerie/courses/fall10/155/resources/op_precedence.html)

**NEW QUESTION 28**

**DRAG DROP**

You are writing a Python program that evaluates an arithmetic formula.  
The formula is described as b equals a multiplied by negative one, then raised to the second power, where a is the value that will be input and b is the result.  
You create the following code segment. Line numbers are included for reference only.

```
01 a = eval(input("Enter a number for the equation: "))
02 b =
```

Code Segments

-

(

)

\*\*

\*\*2

2

a

Answer Area

b =

You need to ensure that the result is correct.  
How should you complete the code on line 02? To answer, drag the appropriate code segment to the correct location. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.  
NOTE: Each correct selection is worth one point.

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

b = (-a)\*\*2

**NEW QUESTION 31**

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