User Define Methods

1. name = input()

   What does the following statement do?

A. Allows a user to enter text in the console
B. Creates an HTML input element
C. Display a message box that allows user input
D. Displays all input device on the computer

2. You develop a Python application for your company. You need to accept input from the user and print that information to the user screen. You have started with the following code. Line numbers are included for reference only.

```
01 print("What is your name?")
02
03 print(name)
```

Which code should you write at line 02?

A. name = input B. input("name") C. input(name) **D.name = input()**

Ans:D

Commend line methods

1. You develop a python application for your company

   You want to add notes to your code so other team members will understand what should you do?

A. Place the notes after # on any line
B. Place the notes within /* and */ in any code segment
C. Place the notes < ! - -and - - > in any code segment
D. Place the notes after // on any line

Options: Ans : A

2. You develop a Python application for your company. You want to add notes to your code so other team members will understand it. What should you do?

A. Place the notes after the # sign on any line

B. Place the notes after the last line of code separated by a blank line

C. Place the notes before the first line of code separated by a blank line

D. Place the notes inside of parentheses on any time **Ans:A**

Variables & Data Types

1. A program that calculate a users approximate year of birth. The program asks user for the user's age(age) and the current year(year). Then outputs the users approximate year of birth in a message.
   You write the following code and answer the questions by selecting the correct option from each drop-down list.
   age = input(" **enter youyr age:** ")
   year = input("**enter the four digit year:** ")
   born = eval(year) - eval(age)
   message = "**you were born in** " + str(born)
   print(message)
   Ans:
   what data types in age in line 01? **Str**
   what data types in born in line 03? **Int**
   what data types in message in line 04? **Str**

2. The ABC company has hired you as an intern on the coding team that creates e-commerce applications.
   You must write a script that asks the user for a value. The value must be used as a whole number in a calculation, even if the user enters a decimal value.
   You need to write the code to meet the requirements.
   Which code segment should you use?

A. totalItems = input("How many items would you like?")
B. **totalItems = float(input("How many items would you like?"))**
C. totalItems = str(input("How many items would you like?"))
D. totalItems = int(input("How many items would you like?"))

Ans : B

3. 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. Select and Place:

Operations

bool | float | int | str

Answer Area

int	age = 2
bool	minor = False
str	name = "Contoso"
float	weight = 123.5
str	zip = "81000"

4. You are developing a Python application for your company. You write the following code:

```
numList = [1,2,3,4,5]
alphaList = ["a","b","c","d","e"]
print(numList is alphaList)
print(numList == alphaList)
numList = alphaList
print(numList is alphaList)
print(numList == alphaList)
```

Use the drop-down menus to select the answer choice that answers each question based on the information presented in the code segment.

Answer Area

What is displayed after the first print? — True / False

What is displayed after the second print? — True / False

What is displayed after the third print? — True / False

What is displayed after the fourth print? — True / False

5. 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 :

Answer Area

```
#Speed calculator


distance = [int / str / float] (input("Enter the distance traveled in feet"))

distance_miles = distance/5280   #convert to miles

time = [int / float / str] (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")
```

6. During school holidays, you volunteer to explain some basic programming concepts to younger siblings.

You want to introduce the concept of data types in Python. You create the following three code segments:

```
# Code segment 1
x1 = "20"
y1 = 3
a = x1 * y1

# Code segment 2
x2 = 6
y2 = 4
b = x2 / y2

# Code segment 3
x3 = 2.5
y3 = 1
c = x3 / y3
```

You need to evaluate the code segments.
For each of the following statements, select Yes if the statement is true. Otherwise, select No. NOTE: Each correct selection is worth one point.

Answer Area

After executing code segment 1, the data type of variable `a` is `str`.

After executing code segment 2, the data type of variable `b` is `float`.

After executing code segment 3, the data type of variable `c` is `int`.

Answer :

Yes are no type

1. **Yes**
2. **Yes**
3. **No**

Random values

1. The number as a multiple of 5
The lowest number 5
The highest number is 100 (**Choose two.)**

A. from random import randint
print(randint(0,20)*5)

B. from random import randint **ans:B**
print(randint(1,20)*5)

C. from random import randrange
print(randrange(0,100,5))

D. from random import randrange
print(randrange(5,105,5) **ans:D**

2. You are writing code that generates a random integer with a minimum value of 5 and a maximum value of 11.
Which two functions should you use? Each correct answer presents a complete solution. (Choose two.)
A, random.randint(5, 12)

B. random.randint(5, 11)

C. random.randrange(5, 12, 1)

D. random.randrange(5, 11, 1)
Ans: B,C

Operator

1. 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	Parenthesis
Exponents	Exponents
And	Unary positive, negative, not
Multiplication and Division	Multiplication and Division
Addition and Subtraction	Addition and Subtraction
Unary positive, negative, not	And

2. value1=24
value2=7
value3=17.9
answer=(value1%value2*100)//2.0**3.0-value2
print(answer)
Ans:
1. The value 30.5 is displayed
2. syntax error occurs
3. The value 457 is displayed
4. The value 30.0 is displayed

3.

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

Evaluate the following Python arithmetic expression:
What is the result?

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

Ans: C

4. You are writing a Python program to perform arithmetic operations. You create the following code:

```
a = 11
b = 4
```

What is the result of each arithmetic expression? To answer, drag the appropriate expression from the column on the left to its result on the right. Each expression may be used once, more than once, or not at all. Select and Place:

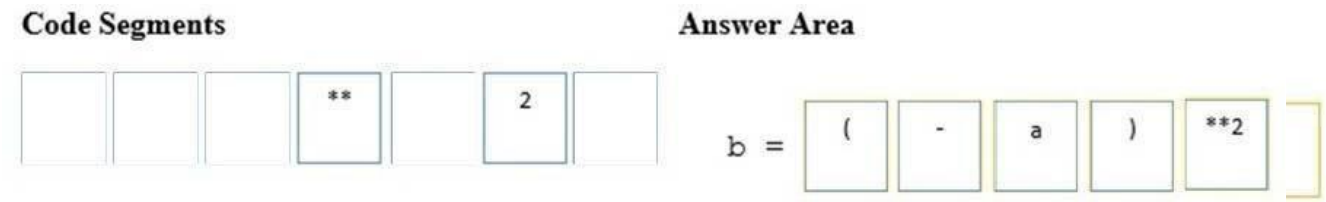
5. You are writing a Python program that evaluates an arithmetic formula. Theformula is described as b equals a multiplied by negative one, then raised tothe second power, where a is the value that will be input and b is the result.You create the following code segment. Line numbers are included for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

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

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.

Select and Place:



Conditional Statements:

1. num1=eval(input("Enter first number:"))
num2=eval(input("Enter second number:"))
if num1==num2:
print("The two are equal") **Ans: True**
if num1<=num2:
print("Number 1 is less than number 2") **Ans:True**
if num1>num2:
print("Number 1 is greater than number2") **Ans: False**
if num2=num1:
print("the two number are the same") **Ans: False**

2. You develop a python application for your company
You need to complete the code so that the print statements are accurate
numList=[1,2,3,4,5]
alphaList=["a","b","c","d","e"]
if numList==alphaList:
print("The values in numlist are equal to alphalist")
else:
print("Not equal")

3. you are creating a function to calculate admission fees by using python.
Admissions fees are calculated based on the following rules:

- Anyone under age 5=free admission
- Anyone age 5 or older who is in school =10 USD
- Anyone age 5 to 17 who is not in school =20 USD
- Anyone older than age 17 who is not in school =50 USD

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

Ans: **if age>=5 and school== True:**
elif age >=5 and school ==false

4. you writing the following code to determine a students final grade based on their current grade(grade) and rank (rank)

```
grade = 76
rank = 3
if grade >80 and rank >=3:
    grade += 10
elif grade >= 70 and rank > 3:
    grade += 5
else:
    grade -= 5
print(grade)
```

What value will print?

A. 71
B. 76
C. 81
D. 86

Ans: A

5. num=int(input("Enter a number with 1 or 2 digits"))
digits="0"

Ans: if num>-10 and num<10:
digits=1
Ans: elif num>-100 and num<100:
digits="2"
Ans: else:
digits=">2"
print(digits+"digits")

6. You are creating a Python script to evaluate input and check forupper andlower 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.
Select and Place:

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.")
```

Ans:

```
name = input("Enter your name:")
if name.lower() ==name:
        print( name ," its lower")if
name.upper() == name:
        print( name ," its Upper")
 else:
        printf(name,"is mixed case")
```

7. You are designing a decision structure to convert a student"™s numeric grade to a letter grade. The program must assign a letter grade as specified in the following table:

Percentage range	Letter grade
90 through 100	A
80 through 89	B
70 through 79	C
65 through 69	D
0 through 64	F

For example, if the user enters a 90, the output should be, "Your letter grade is A". Likewise, if a user enters an 89, the output should be "Your letter grade is B".
How should you complete the code? To answer, select the appropriate code segments in the answer area.

Answer Area

```
#Letter Grade Converter

grade = int(input("Enter a numeric grade"))

[ if grade <= 90: | if grade >= 90: | elif grade > 90: | elif grade >= 90: ]

    letter_grade = 'A'

[ if grade > 80: | if grade >= 80: | elif grade > 80: | elif grade >= 80: ]

    letter_grade = 'B'

[ if grade > 70: | if grade >= 70: | elif grade > 70: | elif grade >= 70: ]

[ ]

    letter_grade = 'C'

[ if grade > 65: ]
```

Answer Area

```
#Letter Grade Converter

grade = int(input("Enter a numeric grade"))

[ if grade <= 90: | if grade >= 90: | elif grade > 90: | elif grade >= 90: ]

    letter_grade = 'A'

[ if grade > 80: | if grade >= 80: | elif grade > 80: | elif grade >= 80: ]

    letter_grade = 'B'

[ if grade > 70: | if grade >= 70: | elif grade > 70: | elif grade >= 70: ]

[ ]

    letter_grade = 'C'

[ if grade > 65: ]
```

8. 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.

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 [ ]
        != "n":
    days_ren == "n":
        == "y":

if day_rented [ ]
        == "Sunday ":
    total = (da >= "Sunday ": * .7
        is " Sunday ":

elif day_rented [ ]
        == "Thursday":
        <= "Thursday":
        is "Thursday":
```

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 [ ]
        != "n":
    days_ren == "n":
        == "y":

if day_rented [ ]
        == "Sunday ":
    total = (da >= "Sunday ": * .7
        is " Sunday ":

elif day_rented [ ]
        == "Thursday":
        <= "Thursday":
        is "Thursday":
```

Looping

For looping

1. employee_pay=[15000,12000,35000,45000]
count=0
sum=0
for index in range(**len(employee_pay)):**
count=count+1
sum=sum+employee_pay[index]
average=**sum/count** **#we can give also sum**count, sum/count**
print("The total payroll is",sum)

While looping

1. review the following code segment

```
product = 2
n=5
while(n!=0):
    product *=n
    print (product)
    n -=1
    if n==3:
        break
```

how many lines of outputs does the code print?

enter the number as an integer here……**2**…….

Ans:2

2. 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.

Hot Area:

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

while (done != -1):

     rating =

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

average = float(sum/count)  +
```

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)
```

rating = :
- print("Enter next rating (1-5), -1 for done")
- float(input("Enter next rating (1-5), -1 for done"))
- input("Enter next rating (1-5), -1 for done")
- input "Enter next rating (1-5), -1 for done")

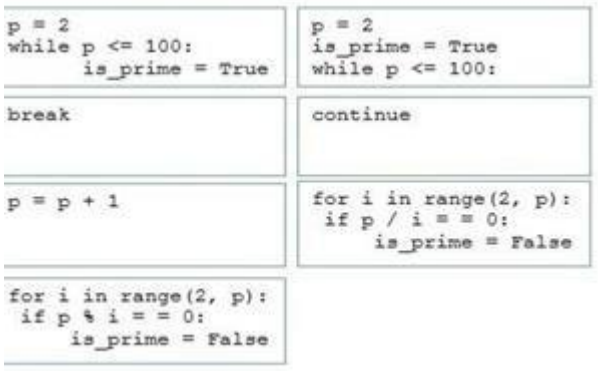
\+ :
- output("The average star rating for NetVerZleep coffee is: "
- console.input("The average star rating for the new coffee is: "
- printline("The average star rating for the new coffee is: "
- print("The average star rating for the new coffee is: "

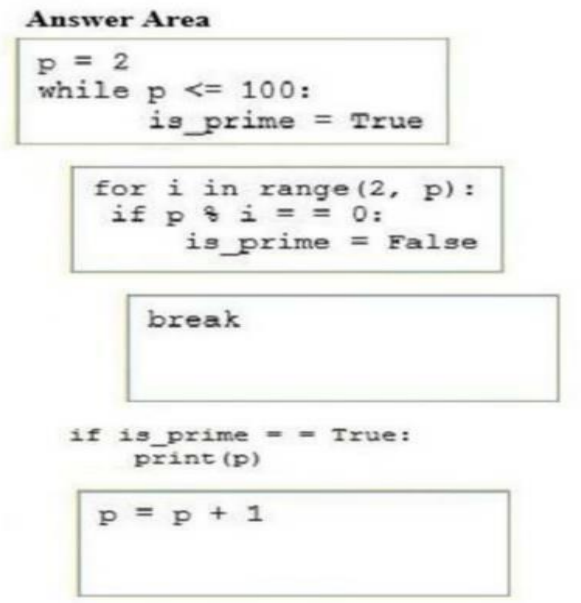
:
- format(average, '.2f'))
- format(average, '.2d'))
- {average, '.2f'}
- format.average.{2d}

3. You are building a Python program that displays all of the prime numbers from 2 to 100.

How should you complete the code? To answer, drag the appropriate code segments 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. Select and Place:





4.
```
x = "hello world"
while x != "quit":
    num = 0
    for char in x:
        num += 1
    print(num)
    x = input("enter a new or quit to exit")
```

5. You are developing a Python application for an online product distribution company. You need the program to iterate through a list of products and escape when a target product ID is found.
How should you complete the code? To answer, select the appropriate code segments in the

answer area.
NOTE: Each correct selection is worth one

1. Which code segment should you use at line o3?
2. Which code segment should you use at line o5?

point. Answer :

Answer Area

```
productIdList = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
index = 0

[ while / for / if / break ]  (index < 10) :

    print(productIdList[index])

    if productIdList[index] == 6 :

        [ while / for / if / break ]

    else :
```

6. Guess an integer from 1 to 10. you will have 3 guesses.

```
from random import randint
target = randint(1,10)
chance = 1
print("Guess an integer from 1 to 10. you will have 3 chances.")
while chance <= 3:
    guess = int(input("Guess an integer: "))
    if guess > target:
        print("guess is too high")
    elif guess < target:
        print("guess is too low")
    else:
        print("Guess is just right!")
    chance +=1
    pass
```

OutPut:

Guess an integer from 1 to 10. you will have 3 guesses.

Guess an integer: 3

guess is too low

Guess an integer: 4

guess is too low

Guess an integer: 5

guess is too low

7.
```
import random
roomsassigned=[1]
room_number=1
grouplists=["rupes","rafting","obstacle","wellness"]
count=0
print("welcome to companypro's team building weekend")
name=input("please enter your name(q to quit)?")
while name != 'q' and count < 50:
    while room_number in roomsassigned:
        room_number=random.randint(1,50)
        print(f"{name}, your room number is {room_number}")
        roomsassigned.append(room_number)
        group=random.choice(grouplists)
        print(f"you will meet with {group} rrtgr")
        count+=1
        name = input("please enter ur name (q to quit)?")
```

OutPut:

welcome to companypro's team building weekend

please enter your name(q to quit)?ramesh

ramesh, your room number is 40

you will meet with obstacle rrtgr

please enter ur name (q to quit)?

Nested Looping

1. You are writing a code to create an E shape from asterisk. You need to print two lines of code with four asterisk each on the first third and fifth lines and oneasterisk each on the second and fourth lines as shown

****

*

****

*

****

Complete the code:

```
result_str="";
for row in range(1,    ):
        for column in range(1,    ):
            if (row == 1 or row == 3 or row == 5)
result_str          =result_str+"*"
            elif column == 1:
                result_str=result_str+" *"

        result_str=result_str
+"\n"print(result_str);
```

AnswerArea

```
result_str="";
for row in range(1,6):
        for column in range(1,5):
if (row == 1 or row == 3 or row == 5)
result_str          =result_str+"*"

            elif column == 1:
                result_str=result_str+" *"

        result_str=result_str
+"\n"print(result_str);
```

String

1. Item=input("Enter the item name: ")

sales =int(input("Enter the quantity: "))
The output must meet the following requirements.

- Enclose string in double quotes.
- Do not enclose number in quotes or other characters.
- by comments

Any 2 options:
Options:
1. Print(item+',’+sales)
2. Print(‘”{0}”,{1}’.format(items,sales))
3. print('"' + item + '"' + sales)
4. print(“{0},{1}”.format(item,sales))

2. review the following code

x = "oranges"

y = " apples"

z = " bananas"

data = "{1} and {0} and {2}"

print(data.format(x,y,z))

what is the output of the print statement?

a. bananas and apple and oranges
b. apples and oranges and bananas
c. bananas and apples and oranges
d. apples and bananas and oranges **Ans : B**

3. 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("Congratulation s 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!")int must be converted to string

Ans: B

4.

```
a = "config1"
print(a)
b = a
a += "config2"
print(a)
print(b)
```

ANSWER:

What is displayed after the second print **- config1config2**

What is displayed after the third print - **config1**

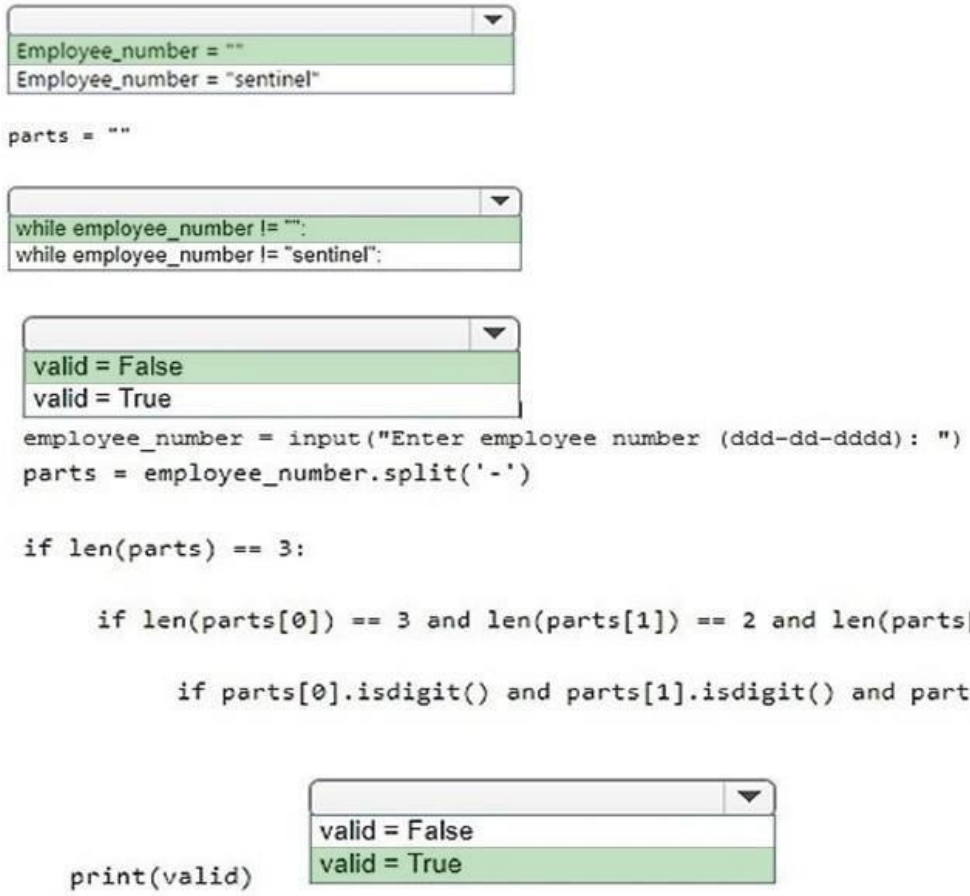
5. You are writing a Python program to validate employee numbers.

The employee number must have the format dd-dd-dddd and consist only of numbers and dashes. The program must print True if the format is correct and print if the format is incorrect.

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

Answer :

Answer Area



List

1. You develop a Python application for your company.
   A list named employees contains 200 employee names, the last five being company management. You need to slice the list to display all employees excluding management.
   Which two code segments should you use? Each correct answer presents a complete solution. (Choose two.)

A. employees [1:-4] B. **employees [:-5]** C. employees [1:-5]
D.employees [0:-4] E.**employees [0:-5]**

Ans:B,E

2. Operation on the following sequence
   structure.alph =
   "abcdefghijklmnopqrstuvwxyz"
   Move the appropriate results from the List to the left to the correct slicing operations on the rightyou may use each results once, more thanonce, or not at all.
   alph[3:15]……..
   alph[:15]…….

i. **defghilklmno**
ii. cdefghijklmn
iii. **abcedfghijklmno**
iv. cdefghijklmnopq
v. defghijklmnopqr

3.

```
list_ 1  = [1, 2]
list_2  = [3, 4]
list_3  = list_1 + list_2
list_4  = list_3*3
print(list_4)
```

Answer Area

What is the output value?

A. [[1,2], [3,4],[1,2],[3,4],[1,2],[3,4]]
B. [[1,2,3,4], [1,2,3,4],[1,2,3,4]]
C. [3,6,9,12]
D. [1,2,3,4,1,2,3,4,1,2,3,4]

Math function

1. You are creating a function that manipulates a number. The function has the following requirements: A floatis 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)**

   Ans: C,E

   Explanation: C: math.floor(x) returns the largest integer less than or equal to x.
   E: math.fabs(x) returns the absolute value of x.

   Incorrect Answers: A: math.fmod() takes two variables
   B: math.frexp(x) returns the mantissa and exponent of x as the pair (m, e). m is a float and e is an integer
   D: math.ceil(x) returns the smallest integer greater than or equal to x

2. You are writing an application that uses the sqrt function. The program must reference the function using the name squareRoot. You need to import the function. Which code segment should you use?

A. import math.sqrt as squareRoot
B. import sqrt from math as squareRoot
C. **from math import sqrt as squareRoot**
D. from math.sqrt as squareRoot

Ans: C

3. 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.

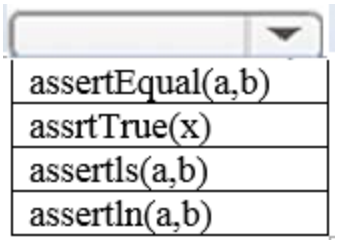
Answer :

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"
```

4. complete the statements about assert method by selecting the correctoptions from the drop down list

a. to test the value of the variables a and b are same use



b. to test that the objects a and b are same use

c. to test whether the value a exists in a list use

Answer :
a. assertEqual(a,b)
b. assertEqual(a,b)
c. assertTrue(x)

Function

1. def calc_power(a,b):
   return a**b
   base=input("Enter the number for the base:")
   exponent=input("enter the number for the exponent:")
   result=calc_power(base,exponent)
   print("The result is"+result)

   Options:
   Line 02 will cause a runtime error: **Ans: True**
   Line 06 will cause a runtime error: **Ans:True**
   The eval function should be used in lines 03 and 04 **Ans:False**

2. def grosspay(hours=40,rate=25,pieces=0,piecerate=0,salary=0):
```
    overtime=0
    if pieces>=0:
        return pieces*piecerate
    if salary>0:
        pass
    if hours>0:
        overtime=(hours-40)*(1.5*rate)
        return overtime=(40*rate)
    else:
        return hours*rate
```

Explanation: **Syntax error no so next function will not work**

1. A Function call of grosspay() will create a syntax error :
   Ans: **True**
2. A Function call of grosspay(salary=500000)will return nothing:
   Ans :**True**
3. A function call grosspay(pieces=500,piecerate=4)will return a result of 2000 **Ans: False**

3. def reverse_name(backward_name):

```
    forward_name=""
    length=len(backward_name),-1
    while length>=0:
        forward_name+=backward_name[length]
        length=length-1
    return forward_name
    return forward_name
print(reverse_name("nohtyp"))
```

4. 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.
Hot Area:

Answer:

Answer Area	Yes	No
Lines 01 through 04 will be ignored for syntax checking.	○	○
The pound sign (#) is optional for lines 02 and 03.	○	○
The string in line 06 will be interpreted as a comment.	○	○

5. def petstore(category,species,bread="none"):

```
    print(f"\nyou have selected an animal fro the {category} category")
    if bread == "none":
        print(f"the {category} you selected is a {species}")
    else:
        print(f"the {category} you selected is a {species} {bread}")
    print(f"\n the {category} would make a great pet!")

category = input("what animal category are you intrested in?")
species = input("what species are they from (canine,feline,scarlet mac")
if category=="dog" or category =="cat":
    bread=input("what bread are you intrested in?")
    petstore(category, species, bread)
else:
 petstore(category,species)
petstore(bread="maltese",species="canine",category="dog")
petstore("bird",species="scarlet macaw")
```

Ans:

1. False
2. True
3. True

6. 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
07      return calories
08 distance = int(input("How many miles did you bike this week? "))
09 burn_rate = 50
10 biker = get_name()
11 calories_burned = calc_calories(distance, burn_rate)
12 print(biker, ", you burned about" ,calories_burned, "calories.")
```

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):**

Ans: A,F

7. you are writing a function that increments the player. Score in a game.The function has the following requirements.

a. If no values is specified for points then points start at one.
b. If bonus is True, then points must be doubledDef increment_score(score,bonus,points):
If bonus==True:
Points =points*2
Score=score+points Return score

```
Points=5
Score=10
New_score=increment_score(score,True,points)
```

Options

1. To meet the rquirements you must change line 1 to Def increment_score(score,bonus,points=1): **True**
2. After any parameter is defined with default value all parameter to theright must also be defined with default values**: False**
3. If you don't change line 1 and function is called with only twoparameter the value of the third parameter will be none:**False**
4. Line 3 will also modify the value of the vanable points declared at line6: **False**

8. The company needs a way to find the count of particular lettersin their publications to ensure that there is a good balance. Itseemsthat there have been complaints about overuse of the letter e. You needto create a function to meet the requirements.

How should you complete this code? To answer, select the appropriate code segments in the answer area. NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

```
#Function accepts list of words from a file,
#and letter to search for.
#Returns count of a particular letter in that list.


def count_letter(letter, word_list):
    count=0
    for [          ]
        if [          ]
            count += 1
        return count

word_list =[]

#word_list is populated a from file. Code not shown.

letter = input("which letter would you like to count")

letter_count= count_letter(letter, word_list)
print("There are: " , letter_count, " instances of " + letter)
```

Answer Area

```
#Function accepts list of words from a file,
#and letter to search for.
#Returns count of a particular letter in that list.


def count_letter(letter, word_list):
    count=0
    for [          ]
        if [          ]
            count += 1
        return count

word_list =[]

#word_list is populated a from file. Code not shown.

letter = input("which letter would you like to count")

letter_count= count_letter(letter, word_list)
print("There are: " , letter_count, " instances of " + letter)
```

- for: word_list in word: / word in word_list: / word == word_list: / word is word_list:
- if: word is letter: / letter is word: / word in letter: / letter in word:

9. You work for a company that distributes media for all ages.
You are writing a function that assigns a rating based on a user"™s age. The function must meet the following requirements:
-> Anyone 18 years old or older receives a rating of "A"
-> Anyone 13 or older, but younger than 18, receives a rating of "T"
-> Anyone 12 years old or younger receives a rating of "C"
-> If the age is unknown, the rating is set to "C"You need to complete the code to meet the requirements. Answer :

Answer Area

```
def get_rating(age):
    rating = ""
    if [ age < 13: rating = "C" | age < 18: rating = "T" | : rating = "A" | age == None: rating = "C" ]
    elif [ age < 13: rating = "C" | age < 18: rating = "T" | : rating = "A" | age == None: rating = "C" ]
    elif [ age < 13: rating = "C" | age < 18: rating = "T" | : rating = "A" | age == None: rating = "C" ]
    else [ age < 13: rating = "C" | age < 18: rating = "T" | : rating = "A" | age == None: rating = "C" ]
    return rating
```

10. You develop a Python application for your company.You have the following code. Line numbers are included for reference only.

```
01 def main(a,b,c,d):
02     value = a+b*c-d
03     return value
```

Use the drop-down menus to select the answer choice that answers each question based on the information presented in the code segment.

Answer :

Answer Area

Which part of the expression will be evaluated first?

- a+b
- b*c
- c-d

Which operation will be evaluated second?

- addition
- subtraction

Which expression is equivalent to the expression in the function?

- (a+b) * (c-d)
- (a + (b*c)) – d
- a + ((b * c) – d)

11. Answer the questions about documenting python code by selecting thecorrectoptions from each drop-down List

1. Which characters signal the beginning and ending of single-line docstrings?	Triple double quote(‘’’’’’)
2. When documenting a function, What is the Standard location for the docstring?	At the end of the function
3. review the following function def cube(n): *** returns the cube of number n *** return n*n*n Which command will print the docstring?	Print(cube.___doc__)

12. you are writing a function to read a data file and print the result as a formatted table. The data file contains information about fruit. Each recordcontains the name, weight, and price of the fruit.

You need to print the data so that it looks like the following sample:Oranges 5.6 1.33
Apples 2.0 0.54
Grapes 10.2 10.96

Specially, the following requirements:

a. The fruit name must print left-aligned in a column 10 spaces wide.
b. The weight must print right aligned in a column 5 spaces wide with up toone digit after the decimal point
c. The price must print right-aligned in a column 7 spaces wide with up totwo digits after the decimal points.

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

```
01.  def  print_table(file):
02.          data = open(file, 'r')
03.          for record in data:
04.              fields =record.split(",")
05.
```

Code segment:

Print("	{10.0}	{5:1f}	{7:2f}
{2:7,2f}	{1:5,1f}	{0:10}	

Answer Area:

				= format(fields[0], eval(fields[1], eval(fields[2])))

Print("	{0:10}	{1:5,1f}	{2:7,2f}	= format(fields[0], eval(fields[1], eval(fields[2])))

13. . students are attending an activity night at their school. The followingFunction leads students where to go for their activity:

```
def roomalignment (student, year)
*** align rooms to students***if year == 1:
print(f"\n(student.title()), please report to room 115")if year == 2:
print(f"\n(student.title()), please report to room 210")if year == 3:


print(f"\n(student.title()), please report to room 320")if year == 4:
print(f"\n(student.title()), please report to room 425")if year == 5:
print(f"\n(student.title()), please report to room 515")else:
print(f"\n(student.title()), please report to room 625")
```

Answer Area

```
def roomalignment (student, year) name =
input("what is your name")grade = 0
while grade not in (1,2,3,4,5,6):
grade = int(input("what grade are you in (1-6)"))
roomalignment(student, year) roomalignment(year=6,
name="George"
if year == 1:
print(f"\n(student.title()), please report to room 115")if year == 2:
print(f"\n(student.title()), please report to room 210")if year == 3:
print(f"\n(student.title()), please report to room 320")if year == 4:
print(f"\n(student.title()), please report to room 425")if year == 5:
print(f"\n(student.title()), please report to room 515")else:
print(f"\n(student.title()), please report to room 625")
```

14. You are writing a function in Python that must meet the following requirements:
• The function accepts a list and a string as parameters.
• The function must search for the string in the list
• If the string is found in the list, the function must print a message indicatingthat thestring was found and then stop iterating through the list
• If the string is not found, the function must print a message indicating that thestringwas not found in the list. In which order should you arrange the code segments to develop the solution?
To answer, move all code segments from the list of code segments to the answerarea and arrange them in the correct order.

A - for i in range(len(items)):
B - if items[i]==term: print("{0} was found in the list.".format(term))
C : Break
D - def search(items,term):
E - else: print("{0} was not found in the list." .format(term))

Answer: D, A, B, C, E

15.

Woodgrove Bank is migrating their legacy bank transaction code to Python.
You have been hired to document the migrated code.
Which documentation syntax is correct?

Answer Area

A. ' Returns the current balance of the bank account

```
def get_balance():
return balance
```

B.
```
def get_balance():
    #Returns the current balance of the bank account

    return balance
```

c.
```
def get_balance():
  /*Returns the current balance of the bank account*/

  return balance
```

D.
```
//Returns the current balance of the bank account

def get_balance():
return balance
```

16.

```
def times_tables():
1----------------------
2----------------------
 print(row*col,end="  ")
print()
#main
times_tables()
```

1.

A. for col in range(13):

B. for col in range(2, 13):

C. for col in range(2,12,1):

D. for col in range(12):

2.

A. for row in range(13):

B. for row in range(2, 13):

C. for row in range(2,12,1):

D. for row in range(12):

17. def safe_divide(numerator,denominator):
if numerator is None or denominator is None:
print("a required value is missing")
elif denominator == 0:
print("the denominator is zero")
else:
return numerator/denominator

18. you are writing a function that increments the player. Score in a game. Thefunction has the following requirements.

- If no values is specified for points then points start at one.
- If bonus is True, then points must be doubled

```
Def increment_score(score,bonus,points):
If bonus==True:
        Points =points*2
Score=score+points Return
score
Points=5
Score=10
New_score=increment_score(score,True,points)
```

Options – True are False Questions:

1. To meet the rquirements you must change line 1 to Def increment_score(score,bonus,points=1): **True**

2. After any parameter is defined with default value all parameter to the right must also bedefined with default values**: False**

3. If you don't change line 1 and function is called with only two parameter the value of thethird parameter will be none:**False**

4. Line 3 will also modify the value of the vanable points declared at line 6: **False**

File Handling

1. You write the following function to read a data file and print each line of the file.

```
01 def read_file(file):
02   line = None
03  if os.path.isfile(file):
04        data = open(file,'r')
05        for line in data:
06            print(line)
```

When you run the program, you receive an error on line 03
What is causing the error?

A. The isfile method does not exits in the path object
B. The isfile method does not accept one parameter
C. The path method does not exist in the OS object
D. You need to import the OS file

Ans : D

2. Create a file using the specified name
Appends the phrase “End of listing” to the file

```
import os
file=open("myfile.txt",'w')
file.write("End of listing")
file.close()
```

3. 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”)

Ans:C

Explanation:

Modes 'r+', 'w+' and 'a+' open the file for updating (reading and writing). Mode 'w+' truncates the file. References:

4. 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**

Ans: F, G, H

5. You are writing a function that works with files. You need to ensure that the function returns None if the file does not exist. If the file does exist, the function must return the first line. You write the following code:

```
import os
def get_first_line(filename, mode):
```

Code Segments

```
if os.path.isfile(filename):
```

```
    return file.readline()
```

```
with open(filename, 'r') as file:
```

```
    return None
```

```
else:
```

In which order should you arrange the code segments to complete the function? To answer, move all code segments from the list of code segments to the answer area and arrange them in the correct order.

Select and Place:

Answer Area

```
with open(filename, 'r') as file:
```

```
  if os.path.isfile(filename):
```

```
    return file.readline()
```

```
  else:
```

```
    return None
```

6. 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.

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

The following shows a sample of data from the file:

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":
```

Answer : **A**

Exception Handling

1. For each statement about try statements select **True** or **False**

Answer Area

	Yes	No
A `try` statement can have one or more `except` clauses.	○	○
A `try` statement can have a `finally` clause without an `except` clause.	○	○
A `try` statement can have a `finally` clause and an `except` clause.	○	○
A `try` statement can have one or more `finally` clauses.	○	○

Ans:

	Yes	No
A `try` statement can have one or more `except` clauses.	●	○
A `try` statement can have a `finally` clause without an `except` clause.	●	○
A `try` statement can have a `finally` clause and an `except` clause.	●	○
A `try` statement can have one or more `finally` clauses.	○	●

2. 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

Ans :C

3. you need to write a codethat perform following the tasks.
A. call the process() function.
B. if the process() function throws an error, call the logerror() function
C. Always call the displayResult() function after calling the process() function.

```
[          ]
process( )
[          ]
logError( )
[          ]
displayResult( )
```

a. assert b. try c. except d. raise e. finally

```
try
process( )
except
logError( )
finally
displayResult( )
```

Date & Time

1. import datetime
   d=datetime.datetime(2017,4,7)
   print('{:%B-%d-%y}'.format(d))

Ans: April-07-17

2. import datetime
dailyspecial=("spagetti","macroni & cheese","meatloaf","fried chicken")
weekendspecial=("lobster","prime rib","parmesan-crusted cod")
today= datetime.datetime.today()
today=today.weekday()
print("my healthy eats delivery")
if today =="friday" or today=="saturday" or today =="sunday":
  print("the weekend specials include:")
  for item in weekendspecial:
    print(item)
else:
  print("the weekend specials include:")
  for item in dailyspecial:
    print(item)
daysleft=today
print(f"pricing specials change in {daysleft} days")'"

Ans:

Now = datetime.datetime.now( )

Today = now strftime(“%W”)

Daysleft = today –todayweekday( )