**Question 01 :(python arithmetic expression)**

Evaluate the following python arithmetic expression:

(6(3\*\*2)+(4\*\*2))

What is the result?

**Answer area**

**A.**20

**B.**150

**C.**50

**D.**70

**Question 02 : (python arithmetic expression)**

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 answer each question based on the information presented in the code segment.

**Answer area**

* which part of the expression will be evaluated first?

**A**.(a+b)

**B**.c\*d

**C**.b-c

* Which part of the expression will be evaluated second?

**Answer area**

**A.** c\*d

**B.(**a+b)-(c\*d)

**C.** b-c

**Question 04 (Type of errors)**

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

You write the following code:

The out.txt file does not exist You run the code. The code will execute without error.

**import sys**

**try:**

**file\_in = open("in.txt",'r')**

**file\_out = open("out.txt",'w+')**

**except IOError:**

**print('cannot open',file\_name)**

**else:**

**i=l**

**for line in file\_in:**

**print(line.rstrip())**

**file\_out.write("line " + str(i) + ":" + line)**

**i = i+ 1**

**file\_in.close()**

**file\_out.close()**

**Answer Area**

1. No change is needed.
2. The code runs, but generate a logic error.
3. The code will generate runtime error.
4. The code will generate a syntax error

**Question 05 (use of “random()” function)**

You need to write code that generates a random **float** with a minimum value of 0.0 and a maximum value of 1.0. Which statement should you use?

**Answer Area**

**A.** rando.randrange(0.0, 1.0)   
**B.** random.randrange()   
**C.**random.random()   
**D.** random.randint(O, 1)

**Question 06 :(code based on “current values”)**

You are developing a Python application for an online game.

You need to create a function that meets the following criteria:

• The function is named **update\_score**• The function receives the current score and a value   
• The function adds the value to the current score   
• The function returns the new score

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

**Answer Area**

**1) .............................. 2) .................................**

**current+=value**

**3)..............................**

1)

1. update\_score
2. def update\_score
3. return update\_score

2)

1. (current,value):
2. ():
3. (current,value)

3)

1. pass current
2. return current:
3. return
4. pass

**Question 07: (use of “try and except” )**

You are creating a program that accepts user input. The program must cast the input into an integer. You must properly hand e the error if the code canru.t cast the input to an integer.

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

**Answer Area**

while True:

1…............

x=int(input("Please enter a number:"))

break

2…........... valueError:

print("Not a valid number. Try again....")

Q-section 1

1. try:
2. Else:
3. except:
4. Raise:
5. Finally:

Q -section 2

1. Try
2. Else
3. Except:
4. Raise
5. Finally

**Question 08:(comparison of numbers )**

You are creating a Python program that compares numbers.

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

**01 num1 = eval (input (“Please enter the first number: " ))   
02 num2 = eval (input ("Please enter the second number: "))   
03 if num1 == num2:   
04 print("The two numbers are equal.")   
Os if num1 <= num2:   
06 print("Number 1 is less than number 2.")   
07 if num1 > num2:   
08 print("Number 1 is greater than number 2.")   
09 if num2 = num1:   
10 print("The two numbers are the same.")**

You need to ensure that the comparisons are accurate.

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

**Answer Area**

The print statement at line 04 will only print if the two numbers are equal in value.

1. yes
2. NO

The print statement at line 06 will only print if num1 is less than num2.

**A.** yes

**B.**NO

**Question 09:(debugging of code)**

Relecloud Virtual Learning asks you to debug some code that is causing problems with their payroll. They ask you to find the source of the payroll errors. The following variables have been declared:

**emp1oyee\_pay = [15000, 120000, 35000, 45000]  
count** = **0   
sum** = **0**There are two errors in the following code:

**for index in range(0, len(employee\_pay)-1)):   
 count** +=**1   
 sum** += **employee\_pay[index]   
average** = **sum//count   
print("The total payroll is:", sum** )   
**print("The average salary is:", average)**

Which code should you use to fix the errors? To answer, select the appropriate code segments in the answer area.

**Answer Area**

**for index in range 1................**

**count** +=**1   
 sum** += **employee\_pay[index]   
average** = **.2..............  
print("The total payroll is:", sum** )

1)

1. (size(employee\_pay)):
2. (size(employee\_pay)-1):
3. (len(employee\_pay)+1):
4. (len(employee\_pay)):

2)

1. Sum/count
2. sum\*\*count
3. sum\*count

**Question 10:(use of “==”sign)**

You develop a Python application for your company.   
How should you complete the code so that the print statements are accurate? To answer. select the appropriate code segments in the answer area.

**Answer Area**

**numList =[1,2,3,4,5]**

**alphaList=["a","b","c","d","e"]**

**1................................**

**print("The values in numList are equal to alphaList")**

**2....................................**

**print("The values in numList are not equal to alphaList")**

1)

1. if numList==alphaList:

B. if numList==alphaList

C. else:

1. else

2)

1. if numList==alphaList:
2. if numList==alphaList
3. else:
4. Else

**Question 11: (Basic programs of python)**

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 indicating that the string was found and then stop iterating through the list   
• If the string is not found, the function must print a message indicating that the string was 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 answer area and arrange them in the correct order.

**Answer Area**

|  |
| --- |
| 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)) |

1. D,A,B,C,E
2. D,B,A,C,E
3. B,D,A,C,E
4. D,A,B,E,C

**Question 12:(program to check no of digit)**

You are writing a Python program to ask the user to enter a number and determine if the number is 1 digit 2 digits, or more than 2 digits long.

You need to write the program.

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

**Answer Area**

**num =int(input("Enter a number with 1 or 2 digits:"))**

**digits=0;**

**1------------------------**

**digits = "1"**

**2......................................................**

**digits= 2**

**.3...................................................**

**digits= ">2"**

1 .

1. if num > -10 and num < 10:
2. lif num> - 100 and num < 100:

2.

1. if num > -100 and num < 100:
2. elif num >-100 and num < 100:
3. if num >-10 and num < 10:
4. elif num >-10 and num <10:

3.

1. else:
2. elif:

**Question 13:(use of “col()” and “row()”)**

Wingtip Toys is creating an interactive Times Table Helper program intended for elementary school children.

You need to complete a function that computes and displays all multiplication table combinations from 2 to 12.

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

**Answer Area**

**#Display times table 2 -12**

**def times\_tables():**

**1-------------------------**

**2-------------------------**

**print(row\*col,end=" ")**

**print()**

**#main**

**times\_tables()**

1)

1. for col in range(13):
2. for col in range(2,13):
3. for col in range(2,12,1):
4. for col in range(12):

2)

1. for row in range(13):
2. for row in range(2,13):
3. for row in range(2,12,1):
4. for row in range(12):

**Question 14:(debugging of code)**

A classmate has asked you to debug the tollowing code:

**x = 4**

**while x >= 1:**

**if x % 4 == 0:**

**print ("party")**

**elif x - 2 < 0:**

**print("cake")**

**elif x/3 == 0:**

**print("greeting")**

**else:**

**print("birthday")**

**x=x-1**

**Answer Area**

What is the output that is printed to the screen?

**A.** birthday

party

greeting

cake

**B.** party

greeting   
 birthday   
 cake

**c.** birthday

greeting   
 party   
 cake

**D.**party

birthday

birthday

cake

**Question 15:(use of “print()”)**

Consider the following code :

A={1,2,3,4,5}:

B={6,7,8,9}:

Print(“a==b”):

If a==b

Print(b)

**Answer Area**

**What is the output of first print() ?**

1. [1,2,3,4,5,6,7,8,9]
2. [1,2,3,4,5]
3. [6,7,8,9]
4. a==b

**What is the output of second print() ?**

1. [1,2,3,4,5,6,7,8,9]
2. [1,2,3,4,5]
3. [6,7,8,9]
4. a==b

**Question 16: (use of “variables” and “print()”)**

You write the following code:

**a='broadband'   
print(a)   
b=a   
a** + = **communication   
print(a)   
print(b)**

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?

1. broadband
2. broadbandcommunication
3. communication

what is displayed after the second print?

1. broadband
2. broadbandcommunication
3. communication

what is displayed after the third print?

1. broadband
2. broadbandcommunication
3. communication

**Question 17: (use of “list()” in python program)**

you Write the following code:

**list\_ 1 = [3, 4]**

**list\_2 = [1, 2]**

**list\_3 = list\_1 + list\_2**

**list\_4 = list\_3\*3**

**print(list\_4)**

you run the code.

**Answer Area**

What is the output value?

1. [[3,4], [1,2],[3,4],[1,2],[3,4],[1,2]]
2. [[1,2,3,4], [3,4,1,2],[3,4,1,2]]
3. [3,6,9,12]
4. [3,4,1,2,3,4,1,2,3,4,1,2]

**Question 18: (python program using “colors()” )**

You develop a Python application for your school.

A list named **colors** contains 200 colors. You need to slice the list to display every other color starting with the second color.

**Answer Area**

Which code should you use?

1. colors[1::2]
2. colors[1:2]
3. colors[2:2]
4. colors[::2]

**Question 19: (Evaluation of python code)**

You evaluate the following code:   
numList = [4,5,6,7,8]

print(9 in numList)

**Answer Area**

What is the output of the print statement?

1. 8
2. False
3. True
4. 9

**Question 20: (python code using “reverse\_name”)**

A coworker wrote a program that inputs names into a database. Unfortunately, the program reversed the letters in each name.

You need to write a Python function that outputs the characters in a name in the correct order.

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**

**def reverse\_name (backwards\_name):**

**forward\_name = ' '**

**for index in 1)............................**

**forward\_name += 2).............................**

**return forward\_name**

**print(reverse\_name("leinad")) #test case**

A. backwards\_name:

B. len(backwards\_name):

C. range(0,len(backwards\_name)-1):

D. range(len(backwards\_name)-1,-1,-1):

2)

1. backwards\_name[index-1]
2. backwards\_name[len(forward\_name)-1]
3. backwards\_name[len(backwards\_name)-len(forwards\_name[)
4. backwards\_name[index]

**Question 21: (use of “comment” in python)**

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

**Question 22: (use of formulae in python code)**

Adventure Works Cycles sales are so exceptional that they decide to give a bonus to all employees who do not make more than $150,000. The following formula applies to each employee based on their base salary and a flat bonus:

New **salary = current salary x 3%** + **a $500 bonus.**You write code that reads the employee salaries into a variable named **salary\_list.**

You need to complete the code that applies an increase to each eligible employee’s salary.

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

**Answer Area**

# Each salary in the list is updates based on increase.Employee making.

#$150,000 or more will not get a raise.

# Salary list is populated from employee database, code not shown.

**salary\_list=[150000,340000,230000,500000,100000,120000,90000]**

**1...................................**

**if salary\_list[index] >=150000:**

**2............................................**

**salary\_list[index] = (salary\_list[index] \*1.03)+500**

1)

1. for index in range(len(salary\_list)+1):
2. for index in range(len(salary\_list)-1):
3. for index in range(len(salary\_list)):
4. for index in salary\_list:

2)

1. exit()
2. continue
3. break
4. end

**Question 22: (while loop)**

You are creating a Python program that will let a user guess a number from 1 to 10. The user is allowed up to three guesses.   
You write the following code. Line numbers are included for reference only.

**01 from random import randint   
02 target = randint(1,10)   
03 chance = 1   
04 print ("Guess an integer from 1 to 10. You will have 3 chances.")   
05   
06 guess = int(input(”Guess an integer: ))   
07 if guess > target:   
08 print ("Guess is too high")   
09 elif guess < target:   
10 print (“Guess is too low")   
11 else:   
12 print ("Guess is just right!”)**

The program must allow three guesses. If the user guesses the correct number, the program must stop asking for guesses.   
How should you complete lines 05, 13, and 14? To answer, drag the appropriate code segments to the correct locations. 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.

**Answer Area**

Which code segement should you use at line 05?

A. while chance <=3 E. while chance <3:

B. break F pass

C. chance+=1 G. while chance < 3

D. chance = 2

Which code segment should you use at line 13?

A. while chance <=3 E. while chance <3:

B. break F pass

C. chance+=1 G. while chance < 3

D. chance = 2

which code segment should you use at line 14?

A. while chance <=3 E. while chance <3:

B.break F pass

C. chance+=1 G. while chance < 3

D. chance = 2

**Question 23: (calculation based python code)**

You are creating a function to calculate admission fees by using Python. Admission 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.

**Answer Area**

**admission\_fee(age, school):**

**rate =0**

**.1.................................**

**rate =10**

**.2....................................**

**3 ....................................**

**rate =20**

1)

1. if age >=5 and school==True:
2. if age >=5 and age < =17:
3. if age >=5 and school ==False:

2).

1. elif age >=5 and school==false:
2. else age >=5 and school ==False:
3. elif age >=5 and school ==True:

3).

1. if age >=5 and school == True:
2. if age >=5 and school == False:
3. if age <=17:

**Question 24: (application of randrange)**

You work on a team that is developing a game for AdventureWorks.   
You need to write code that generates a random number that meets the following requirements:

• The number is a multiple of 5.   
• The lowest number is 5.   
• The highest number is 100.

Which two code segments will meet the requirements? Each correct answer presents a complete solution. Choose two.

**Answer Area**

A. . from random import randrange

print(randrange(5, 100, 5))

B. from random import randrange

print(randrange(0, 100, 5))

C. from random import randint

print(randint(0, 20)\*5)

D. from random import randint

print(randint(1, 20)\*5)

**Question 25: (list structure)**You have the following list structure:

**aiph = “abcdefghijklmnopqrstuvwxyz”**

You need to evaluate the result of performing various slicing operations.

Match the result to the slicing operation. To answer, drag the appropriate result from the column on the left to its slicing operation on the right. Each result may be used once, more than once, or not at all.

**Answer Area**

alph[3:15]

1. zwtqnkheb
2. pmjg
3. defghijklmno
4. ponmlkjihgfe
5. defghijklmnop
6. dgjm
7. olif
8. ""

alph[3:15:3]

1. zwtqnkheb
2. pmjg
3. defghijklmno
4. ponmlkjihgfe
5. defghijklmnop
6. dgjm
7. olif
8. ""

alph[3:15:-3]

1. zwtqnkheb
2. pmjg
3. defghijklmno
4. ponmlkjihgfe
5. defghijklmnop
6. dgjm
7. olif
8. “”

alph [15:3:-3]

1. zwtqnkheb
2. pmjg
3. defghijklmno
4. ponmlkjihgfe
5. defghijklmnop
6. dgjm
7. olif
8. ""

alph[15:3]

1. zwtqnkheb
2. pmjg
3. defghijklmno
4. ponmlkjihgfe
5. defghijklmnop
6. dgjm
7. olif
8. “”

alph[::-3]

1. zwtqnkheb
2. pmjg
3. defghijklmno
4. ponmlkjihgfe
5. defghijklmnop
6. dgjm
7. olif
8. ""

**Question 26: (data types)**

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.

**Answer Area**

age =2

1. bool
2. float
3. int
4. str

minor=False

1. age =2
2. bool
3. float
4. int
5. str

name = "Contoso"

1. age =2
2. bool
3. float
4. int
5. str

weight = 123.5

1. age =2
2. bool
3. float
4. int
5. str

zip ="81000"

1. age =2
2. bool
3. float
4. int
5. str

**Question 27: (date format)**

You write the following code:

**import datetime**

**d = datetime.datetime(2017, 4, 7)   
print('{:%B-%d-%y}' .format(d))   
num=1234567.890   
print({:,.4f)' .format(num))   
You run the program.**

What is the output?

**Answer Area**

A. Apr--07--2017   
 1,234,567.8900   
 Press any key to continue..

B. April\_\_07\_\_17

1.234,567.8900

Press any key to continue...

C. April--07--17   
 1234567.89   
 Press any key to continue...

D. 2017--ApriI--07   
 1,234,567.890

**Question 28: (if-else loop)**

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):

1.................

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

2.................

3 ..............

answer ="Result is an imaginary number"

4...............

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

return answer

**Q - section 1**

1. if a >=0:
2. If a %2==0:
3. else:
4. elif:

**Q - section 2**

1. If a>=0:
2. If a %2==0:
3. else:
4. elif:

**Q - section 3**

1. If a>=0:
2. If a %2==0:
3. else:
4. elif:

**Q - section 4**

1. If a>=0:
2. If a %2==0:
3. Else:
4. elif:

**Question 29: (while loop)**

You are developing a Python apprcation for an online product distribution company.

You need the program to iterate through a list of products and escape when a target product D 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 point.

**Answer Area**

produceIdList =[ 0,1,2,3,4,5,6,7,8,9]

index =0

1.............. (index <10):

print (ProductIdList[index])

if productIdList[index]==6:

2...................

else:

index+=1

**Q - section 1**

1. while
2. For
3. If
4. break

**Q - section 2**

1. While
2. For
3. If
4. break

**Question 30: (application of if-else loop)**

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

A.

|  |
| --- |
| else:  print(name, “is mixed case.”) |

B.

|  |
| --- |
| else:  print(name, “is lower case.”) |

C.

|  |
| --- |
| name = input(“Enter your name: “) |

D.

|  |
| --- |
| else:  print(name, “is upper case.”) |

E.

|  |
| --- |
| elif name.upper() == name:  print(name, “is all upper case.”) |

F.

|  |
| --- |
| if name.lower()==name:  print(name, “is all lower case.”) |

1. C,F,E,A
2. C,E,F,A
3. E,C,D,B
4. C,B,D,A