ITS-303 Python practical test -002

(Line numbers are only present in for reference purposes)

NAME:_____

Q 1

A bank must generate a report that shows the average balance for all customers each day.

The report must truncate the decimal point portion of the balance, which two segments of code achieves the goal?

Each correct answer presents a complete solution (**choose 2**)

A	`print(int(purchase_value /total_sales))`
B	`print(purchase_value //total_sales)`
C	`print(float(purchase_value //total_sales))`
D	`print(purchase_value**total_sales)`

Q 2

A bicycle 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 write the following Python code.

Line numbers are included for reference only

```
1  A_____________________________________________
2        name = input("What is your name?")
3        return name
4  B_____________________________________________
5        calories = miles * calories_per_mile
6        return calories
7
8  distance = int(input("How many miles did you bike this week?"))
9  burn_rate = 50
10 biker = get_name()
11 calories_burned =calc_calories(distance, burn_rate)
   print(biker,",you burned about", calories_burned, "calores.")
```

What segment should be placed at blank A

A	`def get_name():`
B	`def get_name(biker):`
C	`def get_name(name):`

What segment should be placed at blank B

A	`def calc_calories():`
B	`def calc_calories(miles, burn_rate):`
C	`def calc_calories(miles, calories_per_mile):`
Comments/ explanation (Optional)	

Q 3
A company asks you to debug some code that is causing problems with payroll. They ask you to find the source of the payroll errors.

The following variables have been declared:

```
employee_pay =[15000,120000, 35000, 45000]
count = 0
sum = 0
```

There two errors in the following code:

```
for index in range(0,len(employee)-1):
      count +=1
      sum +=employee_pay[index]

average = sum//count
print("The total is:", sum)
print("The average salary is :", average)
```

```
1  for index in range A___________
2        count +=1
3        sum +=employee_pay[index]
4  average = B_________________
5  print("The total is:", sum)
6  print("The average salary is :", average)
7
```

What segment should be placed at blank A

A	(len(employee_pay)):
B	(size(employee_pay)-1):
C	(size(employee_pay)+1):
D	(len(employee_pay)+1):

What segment should be placed at blank B

A	sum/count
B	sum**count
C	sum*count
Comments/ explanation (Optional)	

Q 4
A company decides to give a bonus to all employees who make €150,000 or less per year.

The following formula applies to each employee based on their salary and a flat bonus:

New salary = current salary x 103% + 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.

```
1
2   #Each salary in the list is updated based on increase. Employees making
3   #€150,000 or more will not get a raise.
4   #Salary list is populated from employee database, code not shown.
5
6   (A)_____________________________
7         if salary_list[index] >= 150000:
8               (B)_________
9         salary_list[index] = (salary_list[index] * 1.03)+500
10
```

What segment should be placed at blank A

A	`for index in range(len(salary_list)+1):`
B	`for index in range(len(salary_list)-1):`
C	`for index in range(len(salary_list)):`
D	`for index in salary_list:`

What segment should be placed at blank B

A	`exit()`
B	`continue`
C	`break`
D	`end`
Comments/ explanation (Optional)	

Q 5
A coworker wrote a program that inputs names into a database.
Unfortunately, the program reversed the letters in each name.
(A completely understandable and common ekatsim… sorry typo "mistake" 😊)

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

```
1  #Function reverses characters in a string.
2  # returns new string in reversed order.
3
4  def reverse_name(backward_name):
5      forward_name = ""
6      length = A_____________________
7
8      while length >= 0:
9          forward_name += A_____________________
10         length = length-1
11     return forward_name
12
13 print(reverse_name("nohtyp"))
```

What segment should be placed at blank A

A	backward_name:
B	len(backward_name)-1
C	range(0,len(backward_name),-1)
D	range(len(backward-name)-1,-1,-1)

What segment should be placed at blank B

A	backward_name[index]
B	backward_name[length]
C	backward_name[length+1]
D	backward_name[len(backward_name)-len(forward_name)]
Comments/ explanation (Optional)	

Q 6
A food company needs a simple program that their centre can use to get survey data for a new coffee variety.

The program must do the following tasks:

Accept input(rating).
Return the average rating (average) based on a five-star scale.
Round the output to two decimal places.

```
1   sum = count = done = 0
2   average =0.0
3   while done !=-1:
4         rating = A_____________________
5         if rating ==-1:
6               break
7         sum +=rating
8         count +=1
9         average = float(sum / count)
10        B_____________________ + C_____________________
11
```

What segment should be placed at blank A

A	float(input("Enter next rating (1-5, -1 for done)"))
B	input "Enter next rating (1-5, -1 for done)"
C	input("Enter next rating (1-5, -1 for done)")

What segment should be placed at blank B

A	console.input("The avaerage star rating for the new coffee is:"
B	output("The average star rating for the coffee is:"
C	print("The avarage star rating for the new coffee is"
D	printline("The average star rating for the nerw coffee is :"

What segment should be placed at blank C

A	.{average,".2f"}
B	,format.average.{2d}
C	,format(average,".2d"))
D	

Comments/ explanation (Optional)	

Q7
What will the output of the following code be?

```
1  x,y,x = 25,9, 13.8
2
3  print((x % y * 100)//5.0 ** 2.0 -y)
4
5
6
7
8
```

A	10
B	10.0
C	a syntax occurs.
D	-10

Q 8

A publishing company needs a way to find the count of specific letters in their publications to ensure that there is a good balance.

It seems that there have been complaints about overuse of the letter **'e'**.

You need to create a function to meet the requirements.

Count the number of words that have the specific letters in it.

```
1  #Function accepts list of words from a file
2  #   and letter to search for.
3  #Return count to a particular letter in that list.
4  def count_letter(letter, word_list):
5       count= 0
6       for A_________________
7            if B___________
8                 count +=1
9       return count
10
11 word_list = []
12 #word_list is populated from a file. Code not shown.
13
14 letter = input("which letter would you like to count: ")
15 letter_count = count_letter(letter, word_list)
16 print("There are: ", letter_count, "instances of "+letter)
```

What segment should be placed at blank A

A	word_list in word:
B	word in word_list:
C	word == word_list:
D	word is word_list:

What segment should be placed at blank B

A	word is letter:
B	letter is word:
C	word in letter:
D	letter in word:

Q9

To test that the value of variables a and b are the same, use:

A	assertEqual(a,b)
B	assertTrue(x)
C	assertIs(a,b)
D	assertIn(a,b)

To test that object a and b are the same, use:

A	assertEqual(a,b)
B	assertTrue(x)
C	assertIs(a,b)
D	assertIn(a,b)

To test whether a value exists in a list, use:

A	assertEqual(a,b)
B	assertTrue(x)
C	assertIs(a,b)
D	assertIn(a,b)

Q 10
A video store needs a way to determine the amount to charge customers for DVD rentals.

The amount depends on the time of day the customer returns the DVD. There are also special rates on Thursdays and Sundays. There fee structure in as follows:

The default cost (cost_per_day) is €1.59 per night.
If the customer returns the DVD after 8PM, the store charges them for an extra night, this stored in the "ontime" variable.

There is a 30% discount for DVDs rented Sundays(Sunday),for the full length of the rental. The rent day is stored in the "weekday" variable.

There is a 50% discount for DVDs rented on Thursdays (Thursdays),for the full length of the rental, the length of the stored in the days_rented variable.

```
1  #DVD Rental Calculator
2  ontime = input("Was the video returned before 8PM? Y or N:").lower()
3  days_rented = int(input("How many day was the video  rented?"))
4  weekday = input("What day was the video rented?").capitalize()
5  cost_per_day = 1.59
6  if ontime A__________
7       days_rented +=1
8  if weekday B________________
9       total= (days_rented * cost_per_day)* 0.7
10 elif weekday C_____________
11      total= total= (days_rented * cost_per_day)* 0.5
12 else:
13      total= days_rented * cost_per_day
14 print("Cost of the rental is: €",total)
15
```

What segment should be placed at blank A

A	!="n":
B	=="n":
C	=="y":

What segment should be placed at blank B

A	=="Sunday":
B	>="Sunday":
C	is "Sunday":

What segment should be placed at blank C

	=="Thursaday":
	<="Thursday":
	is "Thursday":
Comments/ explanation (Optional)	

Q11
Check true or false for the following statements

	True	False
Try statements can have one or more final clauses		
Try statements can have final clauses without exceptions		
Try statements can have final clauses and exception clauses		
Try statements can have one or more except clauses		
Try statements must have final clauses		

Q12
Review the following code snippet and check true or false for the following statements.

```
1  def grosspay(hours=40, rate=25, pieces=0, piecerate=0,salary=0):
2        overtime=0
3        if pieces >0:
4              return pieces * piecerate
5        if salary > 0:
6              pass
7        if hours > 40:
8              overtime = (hours-40) *(1.5 * rate)
9              return overtime +(40 * rate)
10       else:
11             return hours * rate
12
13
```

	True	False
A function call of grpsspay() will create a syntax error		
A function call of grosspay(salary= 50000) will return nothing		
A function call of grosspay(pieces=500, piecerate=4) will return a result of 2000		

Q13
What is the output of the print statement?

```
1  a = "apples"
2  b = "pairs"
3  c = "pineapple"
4
5  lunch= "{1} and {0} and {2} "
6  print(lunch.format(a, b, c))
7
```

A	pairs and apples and pineapple
B	pineapple and apples and pairs
C	apples and pineapple and pairs
D	pineapple and apples and pairs
Comments/ explanation (Optional)	

Q14
How many times will the value of x be printed?

```
1  x=2
2  y=6
3
4  while(y !=0):
5        x*=y
6        print(x)
7        y -=1
8        if y== 3: break
9
10
```

Q15
Review the following code snippet and check true or false for the following statements.

```
1  def petStore(category, species, breed= "none"):
2        """Display information about a pet."""
3        print(f"\nYou have selected an animal from the {category} category")
4        if breed=="none":
5              print(f"The {category} you selected is a {species}")
6        else:
7              print(f"The {category}  you selected is a {species} {breed}")
8        print(f"\nThe {category} would make a great pet!")
9
10 category = input("What animal category are you interested in?")
11 species = input("What species are they from (canine, feline, Scarle Macaw)?")
12 if category== "dog" or category=="cat":
13       breed= input("What breed are you interested in?")
14       petStore(category, species, breed)
15 else:
16       petStore(category, species, breed)
17 petStore(breed= "Maltese",species="Canine", category="dog")
18 petStore("bird",species="Scarle Macaw")
19
```

	True	False
The function returns a value.		
The function calls at 14 and 17 are valid		
The function calls at 16 and 18 will result in an error.		

Q16
Review the following code snippet and check true or false for the following statements.

```
1  def calc_power(a,b):
2        return a**b
3  base = input("Enter the number for the base: ")
4  exponent = input("Enter the number for the exponent: ")
5  result = calc_power(base, exponent)
6  print("The result is" + result)
```

	True	False
line 02 will cause a runtime error.		
line 06 will cause a runtime error.		
The eval function should be used in lines 03 and 04		

Q17
What is the following statement do

```
1  name = input("please enter your name")
2
```

A	Creates an HTML input element
B	Allows a user to enter test in the console
C	Display a message box that allows user input
D	Display all input peripheral devices on the computer

Q 18
You are creating a function to calculate admission fees(admission fee) based on the following rules:

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

```
1   def admission(age, school):
2         rate=0
3         A_____________________________
4               rate=10
5         B_____________________________
6               C_____________________
7                     rate=20
8               else:
9                     rate=50
10        return rate
11
```

What segment should be placed at blank A

A	if age >=5 and school==True:
B	if age>=5 and age <=17:
C	if age>=5 and school ==Fales:
D	

What segment should be placed at blank B

A	elif age >=5 and school ==False:
B	else age>=5 and school ==False:
C	elif age >=5 and school==True:
D	

What segment should be placed at blank C

	if age >=5 and school ==True:
	if age >=5 and school ==False:
	if age <= 17:

Comments/ explanation (Optional)	

Q19
Review the following code snippet and check true or false for the following statements.

```
1  num1= eval(input("Please enter the first number :"))
2  num2= eval(input("Please enter the second number :"))
3  if num1==num2:
4        print("The two number are equal")
5  if num1<= num2:
6        print("Number 1 is less than number 2.")
7  if num1 > num2:
8        print("Number 1 is grater than number 2.")
9  if num2== num1:
         print("The two numbers are the same")
```

	True	False
The print statement at line 04 will print only if the two numbers are equal in value.		
The print statement at line 06 will print only if num1 is less than num2.		
The print statement at line 08 will print only if num1 is greater than num2		
The statement at line 09 is an invalid comparson		

Q 20
Use the space provided to specify where, (if anywhere). The code snippet should be put.

```
1  from random import randint
2  target = randint(1,10)
3  chance =1
4  print("Guess an integer from 1 to 10. You will have 3 chances.")
5  A_____________________________
6        guess = int(input("Guess an integer:"))
7        if guess > target:
8              print("Guess is too hight")
9        elif guess < target:
10             print("Guess is to  low")
11       else:
13             print("Guess is just right!")
14             B_____________________________
15       C_____________________________
```

	Blank
break	
chance +=1	
chance =2	
pass	
while chance <3	
while chance <3:	
while chance <=3:	

Q21
you are creating a program that accepts input from the user and outputs the data in a CSV format you write the following code to accept input:

```
item = input ("Enter the item name ")
sales = input ("Enter the quantity: ")
```

The output must meet the following requirements:

Enclose strings in double quotes.
Do not enclose numbers in quotes.
Separate items by commas.

Which two statements with achieve this

A	print('"{0}",{1}'.format(product ,quantity))
B	print('"'+product +'",'+quantity)
C	print(product+','+quantity)
D	print("{0},{1}".format(product ,quantity))
Comments/ explanation (Optional)	

Q 22
You are creating an interactive Times Table Helper program intended for elementary children.

You need to complete a function named time_tables that computes and displays all multiplication table combinations from 1 to 12.

```
1  # Displays time tables 2 - 12
2  def times_tables():
3       A_____________
4            B_____________________
5                 print(row * col , end= " ")
6            print()
7
8  #main
9  times_tables()
```

What segment should be placed at blank A

A	for col in range(13):
B	for col in range(1,13):
C	for col in range(2,12,1):
D	for col in range(12):

What segment should be placed at blank B

A	for row in range(13):
B	for row in range(1,13):
C	for row in range(2,12,1):
D	for row in range(12):
Comments/ explanation (Optional)	

Q23
Review the following code snippet and check true or false for the following statements.

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

	True	False
What is displayed after the first print?		
What is displayed after the second print?		
what is displayed after the third print?		
what is displayed after the fourth print?		

Q24

```
1  age = input("Enter your age:")
2  year= input("Enter the four-digit year:")
3  born= eval(year) - eval(age)
4  message = "You were born in"+ str(born)
5  print(message)
```

what data type is age in line 01?	
What data type is born in line 03?	
what data type is message in line 04?	

Q 25
You are writing a function for the "safe" division of numbers. You need to ensure that a denominator and numerator are passed to the function, and that the denominator is not zero.

```
1  def safe_divide(numerator, denominator):
2       A_____________________________________
3            print("A required value is missing.")
4       B_____________________________________
5            print("The denomintor is zero.")
6       else:
7            return numerator / denominator
```

What segment should be placed at blank A

A	if numerator is None or denominator is None:
B	if numerator in None and denominator is None:
C	if numerator = None or denominator = None:
D	if numerator = None and denominator = None:

What segment should be placed at blank B

A	elif denominator ==0:
B	elif denominator =0:
C	elif denomintor !=0:
D	elif denomintor in 0:

Q26
When you run the program, you receive an error on line 03.

What is causing the error?

```
1  def read_file(file):
2        line = None
3        if os.path.isfile(file):
4              data = open(file, 'r')
5              for line in data:
6                    print(line)
```

A	The path method does not exist in the os obect.
B	The isfile method dose not accept one parameter,
C	The isfile method does not exist in the path object.
D	You need to import the os library.

Q 27

```
1  a="Config1"
2  print(a)
3  b=a
4  a+="Config2"
5  print(a)
6  print(b)
```

What is displayed after the second print?

A	Config1
B	Config1Config2
C	Config2
D	Config2Config1

What is displayed after the third print?

A	Config1
B	Config1Config2
C	Config2
D	Config2Config1

Q 28
You create the following program to locate a conference room and display the room name.

Colleagues report that the program sometime produces incorrect results.
You need to troubleshoot the program.

Line numbers are included for reference only.

```
1  rooms ={1: 'Foyer', 2: 'Conference Room'}
2  room = input ('Enter the room number: ')
3  if not room in rooms:
4       print('Room does not exist.')
5  else:
6       print("the room name is " + rooms[room])
```

Which two date types are stored in the rooms list at line 01?

A	bool and string,
B	float bool,
C	int and string
D	float and int.

What is the data type of room at line 02?

A	bool
B	float
C	int
D	string

Why does line 03 fail to find the rooms?

A	Invalid syntax
B	Mismatched data type(s)
C	Misnamed data type(s)

Q 29
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 within <!-- and --> in any code segment.
B	Place the notes after # on any line.
C	place note after // on any line.
D	place the note within /* and */ in any code segment.

Q 30
You develop a Python application for your company.
You need to complete the code so that the print statements are accurate.

```
1  numList = [1,2,3,4,5]
2  alphaList = ['a','b','c','d','e']
3  A_____________________________
4       print("The values in numList are equal to alphaList ")
5  B_____________________________
6       print("The values in numList are not equal to alphaList ")
7
```

What segment should be placed at blank A

A	if numList = alphaList :
B	if numList == alphaList :
C	if numList += alphaList :

What segment should be placed at blank B

A	else:
B	elif:
C	elseif:
Comments/ explanation (Optional)	

Q 31
You develop a Python application for your company.
Debug this code so there an new errors.

```
1  numbers = [0,1,2,3,4,5,6,7,8,9]
2  index =0
3  while(index <10)
4       print(numbers[index])
5
6       if numbers(index) =6
7            break
8       else:
9            index +=1
```

Which code segment should you use at line 03?

A	while(index < 10):
B	while [index <10]
C	while(index <5):
D	while[index <5]

which code segment should you use at line 06?

A	if numbers[index]==6
B	if numbers[index]==6:
C	if numbers(index)=6:
D	if numbers(index)!=6:
Comments/ explanation (Optional)	

Q 32

```
1  alphabet ="abcderghijklmopqrstuvwxyz"
```

What will the output be form?

```
print(alphabet[4:14])
```

A	erghijklmo
B	derghijklm
C	derghijklm
D	derghijklmo

What will the output be form?

```
print(alphabet[:14])
```

A	erghijklmo
B	abcderghijklmo
C	derghijklm
D	derghijklmo
Comments/ explanation (Optional)	

Q 33

What will the output be form? `print(type(+1E10))`	
What will the output be form? `print(type(5.0))`	
What will the output be form? `print(type("True"))`	
What will the output be form? `print(type(False))`	

Q34

You work on a team that is developing a game.
you need to write code that genera random number that meets that 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?

A	`from random import randrange` `print(rendrange(0,100,5))`
B	`from random import randrange` `print(rendrange (1,20)*5)`
C	`from random import randrange` `print(rendrange (0,20)*5)`
D	`from random import randrange` `print(rendrange (0,105,5))`

Q35
You write the following code to determine a student's final grade based on their current grade and rank.

What grade value will print?

```
1  grade= 76
2  rank= 3
3
4  if grade > 80 and rank >=3:
5       grade +=10
6  elif grade >= 70 and rank >3:
7       grade += 5
8  else:
9       grade -= 5
10
11 print(grade)
```

A	71
B	76
C	81
D	86

Q36.You are writing a function that increments the player score in a game. The function has the following requirements:

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

you write the follow code,

Review the following code snippet and check true or false for the following statements.

```
1  def inctement_score(score, bonus, points):
2       if bonus == True:
3            points= points *2
4       score = score + points
5       return  score
6  points= 5
7  score =10
8  new_score = incremet_score(score, True, points)
```

	True	False
To meet the requirements you must change line 01 to: def increment_score(score, bonus, pints =1):		
After any paramaeter id defined with a default valuem all parameteers to the right must also be defined with default values.		
if you do not change line 01 and the function is called with only two parametes, the value of the third paramete will be None,		
Line 03 will also modify the value of the variable points declared at line 06		

Q 37
You are writing a Python program to determine if a number the user inputs is one, or more than two digits.

```
1  num = int(input("Enter a number with 1 or 2 digits: "))
2  digits ="0"
3  A_____________________________
4        digits ="1"
5  B_____________________________
6        digits ="2"
7  C_____________________________
8      digits ="> 2"
9
   print(digits + " digits. ")
```

What segment should be placed at blank A

A	if num>-10 and num <10:
B	if num>-100 and num <100:

What segment should be placed at blank B

A	elif num>-10 and num <10:
B	elif num > -100 and num<100:

What segment should be placed at blank C

A	else:
B	elif:

Q 38
You are writing code to meet the following requirements:

Allow users to repeatedly enter words.
output the number of characters in each word.

```
1  x= "Hello World"
2  A_____x !="QUIT":
3        num=0
4        B_____ char C____ x:
5              num+=1
6        print(num)
7        x= input("Enter a new word or QUIT to exit:") .upper()
8
```

What segment should be placed at blank A

A	for
B	if
C	while

What segment should be placed at blank B

A	for
B	if
C	while

What segment should be placed at blank C

A	and
B	or
C	in
D	not

Q39
Review the following code snippet and check true or false for the following statements.

```
1  # The calc_power function calculcates exponents
2  # x is the base
3  # y is the exponent
4  # The values of x raised to the y power is returned
5  def calc_power(x,y):
6        comment = "# Retrun the value"
7        return x ** y # raise x to the y power
```

	True	False
Python will not check the the syntax of lines 01 through 04		
The pound sign (#) is optional for lines 02 and 03		
The string in line 06 will be interpreted as a comment		