Question 21

Evaluate the following Python arithmetic expression:

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

What is the result?

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

Question 22

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]

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Question 23

HOTSPOT -
You are an intern for ABC electric cars company. You must create a function that calculates the average velocity of their vehicles on a 1320 foot (1/4 mile) track. The output must be as precise as possible.
How should you complete the code? To answer, select the appropriate code segments in the answer area.
Hot Area:

Answer Area

```
#Speed calculator


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

distance_miles = distance/5280   #convert to miles

time = [ ] (input("Enter the time elapsed in seconds"))
       int
       float
       str

time_hours = time/3600  #convert to hours

velocity = distance_miles/time_hours

print("The average velocity is : ", velocity, " miles/hour")
```

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Question 24

You are creating a function that manipulates a number. The function has the following requirements:
-> A float is passed into the function
-> The function must take the absolute value of the float
-> Any decimal points after the integer must be removed
Which two math functions should you use? Each correct answer is part of the solution. (Choose two.)

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

Question 25

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

Question 26

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)

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- **D.** `random.randrange(5, 11, 1)`

Question 27

DRAG DROP -
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):
```

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:

Code Segments

```
if os.path.isfile(filename):
    return file.readline()
with open(filename, 'r') as file:
    return None
else:
```

Answer Area

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Question 28

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

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

The code must meet the following requirements:
-> Each line of the file must be read and printed
-> If a blank line is encountered, it must be ignored
-> When all lines have been read, the file must be closed
You create the following code. Line numbers are included for reference only.

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

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

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

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

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

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D.

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

Question 29

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()

Question 30

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")

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