Question 1

HOTSPOT -
You are writing a Python program to validate employee numbers.
The employee number must have the format ddd-dd-dddd and consist only of numbers and dashes. The program must print True if the format is correct and print False if the format is incorrect.

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

Answer Area

```
[ Employee_number = ""  |  Employee_number = "sentinel" ]
parts = ""
[ while employee_number != "":  |  while employee_number != "sentinel": ]
[ valid = False  |  valid = True ]
employee_number = input("Enter employee number (ddd-dd-dddd): ")
parts = employee_number.split('-')

if len(parts) == 3:

    if len(parts[0]) == 3 and len(parts[1]) == 2 and len(parts[2]) == 4:

        if parts[0].isdigit() and parts[1].isdigit() and parts[2].isdigit():


[ valid = False  |  valid = True ]
print(valid)
```

Question 2

HOTSPOT -

You are coding a math utility by using Python.

You are writing a function to compute roots.

The function must meet the following requirements:

If `a` is non-negative, return `a**(1/b)`

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

If `a` is negative and odd, return `-(-a)**(1/b)`

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

Hot Area:

Answer Area

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

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

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

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

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

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

Question 3

HOTSPOT -

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.

Hot Area:

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
```

Question 4

HOTSPOT -

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.

Hot 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:
```

Question 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 point.
Hot Area:

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 :
```

Question 6

DRAG DROP -
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:

Code Segments

```
p = 2
while p <= 100:
      is_prime = True
```

```
p = 2
is_prime = True
while p <= 100:
```

```
break
```

```
continue
```

```
p = p + 1
```

```
for i in range(2, p):
 if p / i = = 0:
     is_prime = False
```

```
for i in range(2, p):
 if p % i = = 0:
     is_prime = False
```

Answer Area

```
if is_prime = = True:
    print(p)
```

Question 7

DRAG DROP -

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

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

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.")
```

Answer Area

Question 8

HOTSPOT -

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.

Hot Area:

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)

Question 9

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?"))

Question 10

HOTSPOT -
You create the following program to locate a conference room and display the room name. Line numbers are included for reference only.

```
01 rooms = {1: 'Foyer', 2: 'Conference Room'}
02 room = input('Enter the room number: ')
03 if not room in rooms:
04     print('Room does not exist.')
05 else:
06     print("The room name is " + rooms[room])
```

Colleagues report that the program sometimes produces incorrect results.
You need to troubleshoot the program. Use the drop-down menus to select the answer choice that answers each question based on the information presented in the code segment.
Hot Area:

Answer Area

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

- bool and string
- float and bool
- int and string
- float and int

What is the data type of `room` at line 02?

- bool
- float
- int
- string

Why does line 03 fail to find the rooms?

- Invalid syntax
- Mismatched data type(s)
- Misnamed variable(s)