1. In Python, there are two functions related to ASCII values:

- `ord()` returns the ASCII position of a letter. For example, `ord("A")` returns 65.

- `chr()` returns the letter corresponding to a given ASCII position. For example, `chr(85)` returns "A".

Consider the following code and answer the questions:

```
letter = "B"
oldposition = ord(letter)
newposition = oldposition + 3
newletter = chr(newposition)
print(newletter)
```

a. What is the value being stored in the variable `oldPosition`?
66

b. What is the value being stored in the variable `newPosition`?
69

c. What would be the output of this program?
E

2. Complete the Python program that should:

- Generate two random numbers.
- Add the numbers together.
- If the sum of the dice is more than or equal to 5, subtract 3.
- Output the final number.

```
import random
dice1 = random.randint(1,6)
dice2 = random.randint(1,6)
theSum = dice1 + dice2
if theSum >= 5:
    theSum = theSum - 3
print(theSum)
```

3. Explain why computers only understand binary. (Hint: Think back to your physics lessons with circuits.)
The underlying hardware operates using two states

(true/false) which correspond directly to the two binary digits (1/0)

4. State one benefit of using hexadecimal for humans.
Readability

5. Mollie has made the following statement about hexadecimal:

"Hexadecimal uses less space than binary, for example 1111 0111 is more than F7."
Explain why Mollie is incorrect.
Mollie is incorrect because hexadecimal is a human-readable representation of binary data and does not affect the actual storage space, which is determined by the binary format.

6. Convert `F9` from hexadecimal to binary. Show all your working out.
F = 1111 9 = 1001 11111001

7. Convert `1011 0011` from binary to decimal. Show all your working out.
128 + 32 + 24 + 2 + 1 = 160 + 27 = 187

8. Convert `118` from decimal to binary. Show all your working out.
128 > 118 – 0 118-64=54 – 1 54-32 = 22 – 1 22-16=6 – 1
8 > 6 – 0 6-4=2 – 1 2-2=0 – 1 1 > 0 – 0
01110110

9. Convert `D5` from hexadecimal to decimal. Show all your working out.
D = 13 13*16 = 208 208+5=213

10. A local computer workshop offers a basic computer skills training course for £50 per participant. For groups of 8 or more participants, the workshop provides a collective discount of £30 on the total fee.

Write a Python program to calculate the total fee for a group of participants enrolling in the computer skills training course.

The program should:

- Ask the user to input the number of participants in the group.
- Calculate the total fee by:
  - Charging £50 per participant.
  - Applying a £30 discount to the total fee if the group has 8 or more participants.
- Display the total fee for the group.

Ensure to apply proper indentation, use meaningful variable names, and adhere to Python syntax in your response.

```
participants = int(input("Enter participant count"))
total = participants * 50
if participants >= 8:
    total - 30
print(total)
```