1.What are the two values of the Boolean data type? How do you write them?

Ans: The boolean data types represents logical values and has two values true and false.

example:

```
x = 5

y = 10

print(bool(x==y))

False # the ouput

x = 5

y = 5

print(bool(x==y))

True    # the ouput
```

2. What are the three different types of Boolean operators?

Ans: The three boolean operators are AND(&&),OR(||),NOT(!).

3. Make a list of each Boolean operator's truth tables (i.e. every possible combination of Boolean values for the operator and what it evaluate).

Ans:

A	B	A & B
True	False	False
False	True	False
True	True	True

A	B	A | B
True	False	True
False	True	True
False	False	False

A	B	A ! B

True	True	False
False	False	True

4. What are the values of the following expressions?

(5 > 4) and (3 == 5) : True and False

not (5 > 4) : False

(5 > 4) or (3 == 5): True and False

not ((5 > 4) or (3 == 5)): False and True

(True and True) and (True == False): True and False

(not False) or (not True): True and False

5. What are the six comparison operators?

Ans 1) == : compares if two values are equal.

2) != : compares if two values are not equal to each other and gives the output of it.

3) > : checks if the left operand is greater than right operand and gives the output of it.

4) < : checks if the left operand is lesser than right operand and gives the output of it.

5) >= : checks if the left operand is greater than or equal to the right operand

6) <= : checks if the left operand is lesser than or equal to the right operand

6. How do you tell the difference between the equal to and assignment operators?Describe a condition and when you would use one.

Ans: The difference between two

Use “==” when comparing values to check their equality.

Use “=” when assigning values to variables.

ex:

```
x = 5

if x == 5:

  print(x)
```

```
5          # output
```

7. Identify the three blocks in this code:

```
spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')
```

Ans: block 1: as the given spam value is'nt equal to the 'if' condition value which is 10 so the code is not going to execute.

block 2: Again the spam given value is (0)not greater than 5 in if statement so anyways code(print('bacon')) is not going to execute

block 3 : It contains the else block associated with the second if statement. Since the condition spam > 5 was not met, the code inside this else block executes

8. Write code that prints Hello if 1 is stored in spam, prints Howdy if 2 is stored in spam, and prints Greetings! if anything else is stored in spam.

Ans :

```
spam = [1,2]

if spam == 1:

   print('Hello')

elif spam == 2:

   print('Howdy')

else:

   print('Greetings!')

Greetings!    # the output
```

9.If your programme is stuck in an endless loop, what keys you'll press?

Ans : Ctrl+c

10. How can you tell the difference between break and continue?

Ans: Break statement stops the entire process of the loop. (for) Break also terminates the remaining iterations.

Continue statement only stops the current iteration of the loop.(While) Continue doesn't terminate the next iterations; it resumes with the successive iterations.

11. In a for loop, what is the difference between range(10), range(0, 10), and range(0, 10, 1)?

Ans: range(10), range(0, 10), and range(0, 10, 1) they give the same output as we run them

there is slight difference how they expressed.

1) value = 10

```
for i in range(10):
print(i)
```

2) value = (0, 10)

```
for i in range(0, 10):
  print(i)
```

3) (0, 10, 1)

```
for i in range(0, 10, 1):
  print(i)
```

12. Write a short program that prints the numbers 1 to 10 using a for loop. Then write an equivalent program that prints the numbers 1 to 10 using a while loop.

Ans: example:

```
i) for i in range(1, 11):
  print(i)
```

```
ii) i = 1
while i <= 10:
  print(i)
  i += 1
```

13. If you had a function named bacon() inside a module named spam, how would you call it after importing spam?

Ans:

```
import spam

spam.bacon()
```