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

ANSWER-

True and False. Values in Python can be compared using comparison operations, and Boolean logic can be formulated with the use of logic operations. Busing capital T and F, with the rest of the word in lowercase.

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

ANSWER-

These operators are- and , or , and 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).

ANSWER-

condition 1 (e.g., X)	condition 2 (e.g., Y)	NOT X (~ X)	X AND Y (X && Y)	X OR Y (X || Y)
false	false	true	false	false
false	true	true	false	true
true	false	false	false	true
true	true	false	true	true

4. What are the values of the following expressions?

ANSWER-

(5 > 4) and (3 == 5) --- **FALSE**

not (5 > 4) ---- **FALSE**

(5 > 4) or (3 == 5) ------ **TRUE**

not ((5 > 4) or (3 == 5)) ----- **FALSE**

(True and True) and (True == False) ------ **FALSE**

(not False) or (not True) ------- **TRUE**

5. What are the six comparison operators?

for ex- a=4, b=2
a>b ----True
a>=b -----True
a<b----- False
a<=b ----- False
a==b ------ False
a!=b------True
a<>b --------True

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

The "=" is an assignment operator is used to assign the value on the right to the variable on the left. The '==' operator checks whether the two given operands are equal or not. If so, it returns true. Otherwise it returns false.

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')

The three blocks are everything inside the if statement and the lines print('bacon') and print('ham').

Example-

```
print('eggs')
if spam > 5:
    print('bacon')
else:
    print('ham')
print('spam')
```

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.

ANSWER-

```
spam = input()
if spam == 1:
    print('Hello')
elif spam == 2:
    print('Howdy')
else:
    print('Greetings!')
```

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

ANSWER-

I can use below two steps-

1) If program is running from the command line, I can use or press Ctrl-C to force it to exit.

2) By using break method

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

ANSWER-

Break Statement	Continue Statement
The Break statement is used to exit from the loop constructs.	The continue statement is not used to exit from the loop constructs.

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

ANSWER-

1) When we call range() with one argument, user will get a series of numbers that starts at 0 and includes every whole number up to, but not including, the number that user have provided as the stop.

```
for i in range(10):
    print(i, end=" ")
print()
```

output- 0,1,2,3,4,5,6,7,8,9

2)
 for i in range(starting value,end value):

                Print(i);

Here, by default series will be increasing with +1. So it would be better to take "end value+1" to get desired value.

for i in range(0,10):

                Print(i);

output- 0,1,2,3,4,5,6,7,8,9

3)
for i in range(starting value,end value,step value):

                Print(i);

Here, step value will be +1 because it is assigned. If it is not given, then by default, system take +1 as step value.

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

                Print(i);

output- 0,1,2,3,4,5,6,7,8,9

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.

ANSWER-

1) By using for loop-

for i in range(0,11):

Print(i);

output- 0,1,2,3,4,5,6,7,8,9,10

2) By using while loop-

i=1
while (i<=11):
        print(i)
        i=i+1

output- 0,1,2,3,4,5,6,7,8,9,10

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

ANSWER-

This function can be called with spam. bacon().