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

**Answer –**

1. True
2. False

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

**Answer –**

1. **AND** **operator**: Returns true if both operands are true.
2. **OR** **operator**: Returns true if at least one operand is true.
3. **NOT** **operator**: Negates the value of the operand.

**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 ).**



**4. What are the values of the following expressions?**

(5 > 4) and (3 == 5)

**Answer – False**

not (5 > 4)

**Answer – False**

(5 > 4) or (3 == 5)

**Answer – True**

not ((5 > 4) or (3 == 5))

**Answer – False**

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

**Answer – False**

(not False) or (not True)

**Answer – True**

**5.What are the six comparison operators?**

1. (a == b) - Equal to
2. (a != b) - Not equal to
3. (a > b) - Greater than
4. (a < b) - Less than
5. (a >= b) - Greater than or equal to
6. (a <= b) - Less than or equal to

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

**Answer –**

The equal to operator (==) is used for comparing values, while the assignment operator (=) is used for assigning values to variables. You would use the equal to operator when you want to check if two values are equal. On the other hand, you would use the assignment operator when you want to assign a value to a variable.

**Condition-**

x = 10

if x == 10:

print("x is equal to 10")

**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')

**Answer –**

**Block 1 –**

spam = 0

if spam == 10:

print('eggs')

**Block 2 –**

if spam > 5:

print('bacon')

else:

print('ham')

**Block 3 –**

print('spam')

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 –**

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 –**

**Ctrl + C**

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

**Answer –**

1. **Break** terminates the loop entirely and proceeds to the next statement after the loop.
2. **Continue** skips the remaining code for the current iteration and moves on to the next iteration.

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

**Answer –**

There is no difference between range(10), range(0, 10), and range(0, 10, 1) all generate the same sequence of values in a for loop, which starts from 0 and goes up to 9, but does not include, 10.

**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 –**

**For Loop –**

for i in range(1, 11):

print(i)

**While Loop -**

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?**

**Answer –**

**import spam**

**spam.bacon()**