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

Ans. True

False

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

Ans. **Comparison Operators** and **Logical Operators**

Comparison Operators such as : 3==4 🡪False

Comparing values and giving results in the form of True and false.

Operators that can be used : ==,>,<,!= etc

Logical Operators: 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.

TRUTH Table of AND OPERATOR

|  |  |  |
| --- | --- | --- |
| X | Y | X and Y |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

TRUTH Table of OR OPERATOR

|  |  |  |
| --- | --- | --- |
| X | Y | X OR Y |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

TRUTH Table for NOT

|  |  |
| --- | --- |
| X | Not X |
| TRUE | False |
| False | True |

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

**(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?**

**Ans.**

**== , > ,< ,>=,<=,!=**

**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 '=' is assignment operator and is used to assign the result of the expression on the right side of the operator to the variable on the left side.

The '==' is the comparison operator and is used to check whether the two expressions on both sides are equal or not.

X=10

10 is assigned to the variable X.

**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. ham

spam

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.**

spam=3

if spam==1:

print('Hello')

if spam==2:

print('Howdy')

if spam>2:

print('Greetings!')

**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: Breaks and exists the loop

Continue: Continues to the next iteration

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

**Ans.**

**range(10)-** Prints number 10 numbers starting from 0 . 0-9

**range(0, 10)-** Prints 10 numbers between starting point and end point .0-start number , 10- numbers to be printed.

**range(0, 10, 1)-** Start point, end point , 1- steps between the numbers.

**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.**

**For loop**

for i in range(1,11):

print(i)

**While Loop**

i=1

while (i<=10):

print(i)

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()