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

**Ans.** True & False are two types of Boolean data type.

print(10 > 9)

print(10 == 9)

print(10 < 9)

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

**Ans.** ‘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 evaluates).**

|  |  |
| --- | --- |
| **Operator** | **Result** |
| X **or** Y | It X is False, then Y, else X |
| X **and** Y | If X is False, then X else Y |
| **not** X | If X is true, then False, else True |

**Ans.**

True and True is True

True and False is False

False and True is False

False and False is False

True or True is True

True or False is True

False or True is True

False or False is False

not True is False

not False is True

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

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

**not (5 > 4)**

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

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

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

**(not False) or (not True)**

**Ans.** (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.**

|  |  |
| --- | --- |
| **OPERATOR** | **MEANING** |
| == | Equal to |
| < | Less than |
| > | Greater than |
| != | Not equal to |
| <= | Less than or equal to |
| >= | Greater 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.**

**Ans.** The first, = is the assignment operator, which will set one value equal to another. The second, == is a comparison operator which will evaluate whether two values are equal.

A **condition** is an expression used in a flow control statement that evaluates to a Boolean value.

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

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.**

**Ans**. spam = int(input("Enter a number"))

if spam == 1:

print("Hello")

elif spam == 2:

print("Howdy")

else:

print("Greeting!")

**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.** The *break* statement will move the execution outside and just after a loop

The *continuous* statement will move the execution to the start of the loop.

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

**Ans.** range (10) means it will call from 0 up to 10 (not including 10)

range (0,10) means it specifically call from 0 up tp to 10 but not include 10.

range (0,10,1) means call from 0 to 10 but not include 10 at interval of 1.

Hence, all the three are same result.

**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 i in range(1 , 11):

print(i)

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.**  spam.bacon()