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

**Ans**: 2 values of Boolean data type are True & False. They can be used as True and False or can also be used as 1 and 0 respectively.

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

**Ans**: Boolean operators are as follows:

1. == : this is used to check if one value is equal to another value
2. >, <, <=, >= : These are greater-than, less-than greater than or equal-to and less than or equal-to operators and these are used to compare 2 values.
3. And – this operator is used to check if 2 or more comparative cases are true or false. ‘And’ returns true only if both the expressions are True otherwise it returns False.
4. Or – Or is also used to check if 2 expressions or values are true or false. Or returns False only if both expressions are False, otherwise it returns True.
5. Not – not is used to negate a statement, meaning if an expression is True, then not(True) becomes False and vice versa.

**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:**

And

|  |  |  |
| --- | --- | --- |
| Expressoin1 | Expression2 | Output |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

Or

|  |  |  |
| --- | --- | --- |
| Expressoin1 | Expression2 | Output |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

Not

|  |  |
| --- | --- |
| Expressoin1 | Output |
| 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**: the comparison operators are [==, !=, <, >, <=, >=]

**6. How do you tell the difference between the equal to and assignment operators?Describe a**

**condition and when you would use one.**

**Ans**: Equal to operator is used to check if a value is equal to another value and it is used as ==.

Assignment operator is used to assign a value to a variable and the operator is =.

Ex: a = 10

If a == 5:

print(‘the value is 5’)

**7. Identify the three blocks in this code:**

spam = 0

if spam == 10:

print(‘eggs’) -------------------------Indentation missing

if spam > 5:

print(‘bacon’) ----------------------- Indentation missing

else:

print(‘ham’) ------------------------- Indentation missing

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.**

**Ans:**

spam = 1

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?**

**Ans:**

Go to Kernel 🡪 Restart Kernel…

Or Ctrl + Shift + R

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

**Ans:**

Break is used to terminate the loop and the control comes out of the loop to the next block in the program. Continue is used only to terminate the current iteration of the loop and the control is given to the next iteration in the loop.

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

**Ans:**

There is no difference between range(10), range(0,10) and range(0, 10, 1)

**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:**

1. for i in range(1, 11):

print(i)

1. i = 1

while i < 11:

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()