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

The two values of the Boolean data type are True, False

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

Three different types of Boolean operators are:

1. Comparison Operator ( ==, > , < , !=, <=, >=)
2. Binary Boolean Operator (and, or)
3. Not Operator

**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 ).**

|  |  |
| --- | --- |
| **Expression** | **Evaluates To** |
| True or False | True |
| True or True | True |
| False or False | False |
| False or True | True |

|  |  |
| --- | --- |
| **Expression** | **Evaluates To** |
| True and False | False |
| True and True | True |
| False and False | False |
| False and True | False |

|  |  |
| --- | --- |
| **Expression** | **Evaluates To** |
| Not True | False |
| Not False | True |

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

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

not (5 > 4) => Not True => ***False***

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

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

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

(not False) or (not True) => ***True***

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

|  |  |
| --- | --- |
| **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.**

Equal to operator looks like “==” (double equal to), while the assignment operator contains single “=” equal to operator.

Equal to operator is used when we are comparing two values, while the assignment operator is used when we want to assign a value/variable’s value to another variable

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

spam = 0

if spam == 10:

***print('eggs')***

if spam > 5:

***print('bacon')***

else:

***print('ham')***

*# below two lines can be inside else block, or outside if else ladder*

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.**

*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?**

*Ctrl + C*

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

Break is used to terminate the enclosing loop, whereas continue helps skip the remining part of the loop

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

All three as same as for range function the default value of the third argument is 1, so even though if it is not passed, it takes it as 1 by default. Range by default starts at 0 if not passed, if single number is passed, it will assume that value to be end of the range and will enumerate from 0 till the given number.

So for a for loop all above three range functions will result into same output.

**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.**

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

*print(i, end = " ")*

*i = 1*

*while i <= 10:*

*print(i, end = " ")*

*i += 1*

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

Spam.bacon()