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

**Answer-:** Two values of the Boolean data type are

1. True
2. False

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

**Answer-:** There are three logical operators that are used to compare values. They evaluate expressions down to Boolean values, returning either True or False . These operators are-:

**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 evaluate ).

**Answer-:**

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.

Truth table is given below:

|  |  |  |
| --- | --- | --- |
| Boolean AND | | |
| A | **B** | **RESULT** |
| TRUE | FALSE | FALSE |
| FALSE | TRUE | FALSE |
| FALSE | FALSE | FALSE |
| TRUE | TRUE | TRUE |

|  |  |  |
| --- | --- | --- |
| Boolean OR | | |
| A | **B** | **RESULT** |
| TRUE | TRUE | TRUE |
| TRUE | FALSE | TRUE |
| FALSE | TRUE | TRUE |
| FALSE | FALSE | FALSE |

|  |  |
| --- | --- |
| Boolean NOT | |
| NOT TRUE | FALSE |
| NOT FALSE | TRUE |

4. What are the values of the following expressions?

**ANSEWER-:**

(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?

**Answer**-: The six comparision operators are:

== , !=, <, >, <=, and >=

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

**Answer-:** == is the equal to operator that compares two values and evaluates to a Boolean, while = is the assignment operator that stores a value in a variable.

Example is in attached colab sheet.

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-:** Answer is in attached colab sheet

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-:** Answer is in attached colab sheet

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-:** The break statement will move the execution outside and just after a loop. The continue statement will move the execution to the start of the loop.

Example is in attached colab sheet.

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

**Answer-:** Answer is in attached colab sheet. Although they all does same thing.

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-:** Answer is in attached colab sheet

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

**Answer-:** This function can be called with spam.bacon()