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

**Ans**: 1-True 2-False

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

**Ans**: 1: AND (&) ,2: OR (/) ,3: 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** :

The logical operators and , or , not are also referred as boolean operators.

Boolean operator **and** returns **true** if both operands returns true

**TruthTable :**

|  |  |  |
| --- | --- | --- |
| **EXPRESSION 1** | **EXPRESSION 2** | **Boolean Value** |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

Boolean operator **or** returns **true** if any one operand returns true

**TruthTable :**

|  |  |  |
| --- | --- | --- |
| **EXPRESSION 1** | **EXPRESSION 2** | **Boolean Value** |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

Boolean operator **not** returns **true** if the operand is a flase expression and returns false .

**TruthTable :**

|  |  |
| --- | --- |
| **EXPRESSION** | **Boolean Value** |
| True | False |
| False | 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. What are the six comparison operators?

**Ans** :

1. Less than ( < )

2. Greater than ( > )

3. Greater than or equal ( >= )

4. Less than or equal ( <= )

5. Equal to ( ==)

6. Not equal ( != )

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 compare the variableso r values returns the value as boolean type i.e, either True or False . But assignment operator is used to assign a value to the variable of any type .

Equal to ex: if ( a == b)

{

do this

}

assignment operators ex:

a = 10

b = a

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** : if block

if block

else block

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 = input()

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** : ctrl + c

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

**Ans** :

Break statement always breaks the loop and dont check for the next condition and comes out of the loop.

Continue statement is to stop the execution of next statement and through the control to the loop to check the next condition

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

**Ans** : All are equal

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** :

**using for loop :**

for i in range(1,10+1) :

print(i)

**using for loop :**

n = 10

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