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

* The two values of Boolean data type are True and False
* We write them as True, False

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

* The three basic types of Boolean operators are And,Or,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 ).

And Operator:

|  |  |  |
| --- | --- | --- |
| A | B | A and B |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

Or operator:

|  |  |  |
| --- | --- | --- |
| A | B | A or B |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |

Not Operator:

|  |  |
| --- | --- |
| A | Not(A) |
| 0 | 1 |
| 1 | 0 |

4. What are the values of the following expressions?

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

* Ans: False (or) 0

not (5 > 4)

* Ans: False (or) 0

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

* True (or) 1

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

* Ans: False (or) 0

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

* Ans: False (or) 0

(not False) or (not True)

* Ans: True (or) 1

5. What are the six comparison operators?

* The six comparison operators are **< (**Less than**), >(**Greater than**), ==(**Equals to**), <= (**Less than or equal to**), >=(**Greater than or equal to**), !=(**not Equals to**)**

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

* For equal to we use ‘==’ to compare the variables
* For assigning a value to variable we use ‘=’

**Example:**

* 3==3 (Comparison) -> gives True as output
* A = 3(assignment) -> gives value 3 when we call variable A

7. Identify the three blocks in this code:

**1) spam = 0**  ----> initializing the variable a first block of code

**2) if spam == 10:** ----> comparing the variable with required conditions for respective outputs

**print('eggs')**

**if spam > 5:**

**print('bacon')**

**else:**

**print('ham')**

**3) print('spam')** ---> prints the outputs directly

**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.

* spam = 4

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 will stop execution of loop where as continue will skip that line of execution of loop and starts with the execution of next iteration of loop

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

* In range(10), we didn’t specify the starting index and increment by number, so by default it takes 0 as start , increment as 1 and output is (0-9)
* In range(0,10), we specify the starting index as 0 and as increment by is not provided by default it takes 1 as increment by and output is (0-9)
* In range(0,10), we specify the starting index as 0 and increment by is 1 as increment and output is (0-9)
* All 3 gives 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)

* i = 0

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?

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