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

**Two values of boolean data types are: True, False.**

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

**AND: when all the participating conditions are true in the expression mandatorily.**

**OR: When any one of the participating conditions are true in the expression.**

**NOT: It negates the values of the out. Makes output True a False if used 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 ).

| Boolean Operator | Boolean variable A | Boolean variable B | Expression | Final output |
| --- | --- | --- | --- | --- |
| AND | True | False | A **AND** B | False |
|  | False | True | A **AND** B | False |
|  | True | True | A **AND** B | True |
|  | False | False | A **AND** B | False |
| OR | True | False | A **OR** B | True |
|  | False | True | A **OR** B | True |
|  | True | True | A **OR** B | True |
|  | False | False | A **OR** B | False |
| NOT | - | False | **NOT** B | TRUE |
|  | True |  | **NOT** A | False |

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) - **True**

(not False) or (not True) - **True**

5. What are the six comparison operators?

**==**

**!=**

**>**

**<**

**>=**

**<=**

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

**Assignment operator: =**

**Equal operator: ==**

**Example:**

**Assignment: x = 5**

**Equal operator: 5==6?**

7. Identify the three blocks in this code:

Could be more combinations for Block3, but most obvious should be-

**Block1:**

spam = 0

if spam == 10:

print('eggs')

**Block2:**

if spam > 5:

print('bacon')

else:

print('ham')

**Block3:**

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.

**spam=input("enter the number to be 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?

**crtl+c using the keyboard or stop the execution from jupyter..**

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

**break: With break keyword the overall loop execution is stopped as soon as the break condition is fulfilled.**

**Continue: Here as soon as the continue keyword is encountered , that particular iteration execution of the loop is exited to the next iteration of the loop and not the whole loop execution will be skipped.**

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

**range(10) - Range starts from 0 index(default start index) and goes till 9th index.**

**range(0,10) - Range starts from 0 index and goes till 9th index excluding 10th index.**

**range(0,10,1)- Range will start from 0 index and increase by a step of 1 till it reaches 9th index**

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(11):**

**print(i)**

**—----------------------------**

**i=1**

**while i<=10:**

**print(i)**

**i +=1**

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

**variable=spam.bacon()**