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

**True and False**

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

**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 ).

OR

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

AND

|  |  |  |
| --- | --- | --- |
| A | B | A And B |
| 1 | 1 | 1 |
| 1 | 0 | 0 |
| 0 | 1 | 0 |
| 0 | 0 | 0 |

NOT

|  |  |
| --- | --- |
| A | Not A |
| 1 | 0 |
| 0 | 1 |

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) **False**

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

5. What are the six comparison operators?

**less than(<) , less than or equal to(<=), greater than(>) , greater than or equal to(>=) ,equal to(=), not 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 (==) operator checks whether the two given operands are equal or not. If so it will return true else it will return false.**

**1==1 O/P : True**

**1==2 O/P : False**

**Assignment (=) operator is used to assign the value on the right to the value on the left.**

**a= 10**

**b= 20**

**a=b**

**print(a,b)**

**O/P: 20 20**

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')

**The three blocks are everything inside the if statement and the lines print('bacon') and print('ham').  
print('eggs')  
if spam > 5:  
print('bacon')  
else:  
print('ham')  
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 Number")**

**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?

**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.**

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

**All will result the same output .**

**Range(10) call ranges from 0 up to (but not including) 10,**

**Range(0,10) explicitly tells the loop to start at 0**

**Range (0,10,1) explicitly tells the loop to increase the variable by 1 on each iteration**.

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(1,10):**

**print(i)**

**a=1**

**while a < 10:**

**print(a)**

**a = a+1**

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

**spam.bacon()**