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

True and False are 2 boolean data types. As far as python is concerned, they should start with a caps character and every other character is in lower case.

Ex: bl = True; bl2 = False; Note: Should not put quotes around them.

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

The three basic boolean 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 ).

AND:

| p | q | p and q |
| --- | --- | --- |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

OR:

| p | q | p or q |
| --- | --- | --- |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

NOT:

| p | not(p) |
| --- | --- |
| True | False |
| False | True |

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?

**Operator Name Example**

== Equal x == y

!= Not equal x != y

> Greater than x > y

< Less than x < y

>= Greater than or equal to x >= y

<= Less than or equal to x <= y

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

Ex: **K = 10;**  Assigns 10 to variable K whereas

**K == 10;** means checking if k is equal to 10 or not.

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')

**Note: Colour Coded the blocks.**

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.

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?

You can stop an infinite loop with **CTRL + C** .

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

break –> Stops the iteration of the loop at that point and get out of loop.

continue —-> jumps to next iteration of the loop.

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

all of these output the same range sequence from 0 to 9.

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 = 0

while i<11:

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?

import spam

spam.bacon()

#Alternative

from spam import \*

bacon()