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

Two values of Boolean data types are **TRUE** and **FALSE.**

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

**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 | | |
| In1 | In2 | Output |
| TRUE | TRUE | TRUE |
| TRUE | FALSE | FALSE |
| FALSE | TRUE | FALSE |
| FALSE | FALSE | FALSE |

|  |  |
| --- | --- |
| NOT | |
| In1 | Output |
| TRUE | FALSE |
| FALSE | TRUE |

|  |  |  |
| --- | --- | --- |
| OR | | |
| In1 | In2 | Output |
| TRUE | TRUE | TRUE |
| TRUE | FALSE | TRUE |
| FALSE | TRUE | TRUE |
| FALSE | FALSE | 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) **False**

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

5. What are the six comparison operators?

== equal to, >= greater or equal to ,<= less or equal to,!= not equal to, > greater than , < less than

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

For assignment single operator is used like x = 5, while for comparison double operators used like ==, >= etc.

For any condition checking equal to operator used like if (x==y) etc.

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')

**Here span is equal to 0 so it will execute else condition and it will print**

**"ham"**

**"spam"**

**"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.

if spam == 1:

print("Hello")

elif span ==2:

print("Howdy")

else:

print("Greetimgs!")

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 come out of recent do while, for or while loop**

**continue will bring the program control to the beginning of the loop.**

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

range(10), range(0, 10), and range(0, 10, 1) will works similarly, here range function will return sequence of numbers from 0 to 9 with increment of 1.

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.

**using for loop**

for j in range(1,11):

print(j)

**using while loop**

j=1

while(j<11):

print(j)

j = j + 1

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

we can call bacon inside module spam using

**spam.bacon()**

**or**

**from spam import bacon**