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

The two values of the Boolean data type are true and false which are written as True and False respectively

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

The three different 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 evaluates).

**AND**

| **x** | **y** | **x and y** |
| --- | --- | --- |
| False | False | False |
| False | True | False |
| True | False | False |
| True | True | True |

**OR**

| **x** | **y** | **x and y** |
| --- | --- | --- |
| False | False | False |
| False | True | True |
| True | False | True |
| True | True | True |

**NOT**

| **x** | **not x** |
| --- | --- |
| 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?

== Equal

!= Not equal

> Greater than

< Less than

>= Greater than or equal to

<= Less than or 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.

The assignment operator is =. It is used whenever we need to store a value in a variable.

x =10 means the value 10 is associated with variable x

The “equal to” operator == is a comparison operator and we use it to check whether two values (of expression or variable) are the same. It returns a True if the values are equal and returns a False if the values are not equal.

7. Identify the three blocks in this code:

spam = 0

if spam == 10: # First Block

print('eggs')

if spam > 5: # second block

print('bacon')

else:

print('ham')

print('spam') # third block

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.

#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=29

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 can be used to stop the endless loops.

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

The break statement stops the current iteration and exits from the loop

Continue statement stops the current iteration and continues with the 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)?

There is no difference. The expressions range(10), range(0, 10), and range(0, 10, 1) give values 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.

# program that prints the numbers 1 to 10 using a for loop.

for i in range(1,11,1):

print(i)

# program that prints the numbers 1 to 10 using a while loop.

i=1

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?

import spam

spam.bacon()