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

The two values are TRUE and FALSE. Boolean Expressions are performed using Relational (>,<,<=,>=,==,!=) and Logical Operators(!,&&,||).

Eg: >>> 5 == (3 + 2)

True

>>> 5 >= 6

False

>>> j = "hel"

>>> j + "lo" == "hello"

True

>>>7!=6

True

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 ).

| **a** | **b** | **a and b** |
| --- | --- | --- |
| False | False | False |
| False | True | False |
| True | False | False |
| True | True | True |

| **a** | **b** | **a or b** |
| --- | --- | --- |
| F | F | F |
| F | T | T |
| T | F | T |
| T | T | T |

| **a** | **not a** |
| --- | --- |
| F | T |
| T | F |

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?

>,<,<=,>=,==,!=

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

The equal to (==) operator checks whether the two given operands are equal or not. If so, it returns true. Otherwise, it returns false.

For example:

20==4

This will return False.

The Assignment operator (=) is used to assign the value to a variable. Eg: a = 10;

b = 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')

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

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=int(input("Enter the Integer:"))

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 and continue both are used to skip the iteration of a loop.

The break statement terminates the whole iteration of a loop

The Continue terminates the current 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 three return the same output.

for i in range(0,10,1):

print(i)

Output:

0

1

2

3

4

5

6

7

8

9

for i in range(0,10,):

print(i)

Output:

0

1

2

3

4

5

6

7

8

9

for i in range(10):

print(i)

Output:

0

1

2

3

4

5

6

7

8

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(1,11):

print(i)

Output:

1

2

3

4

5

6

7

8

9

10

**While loop:**

i = 1

while i < 11:

print(i)

i += 1

Output:

1

2

3

4

5

6

7

8

9

10

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

spam.bacon()