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

Ans: True and False are the two types of Boolean data types, you wite them as

a) **True**
b) **False**

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

Ans: and, or & not, are the three different types.

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).

Ans:

AND		
INPUT 1	**INPUT 2**	**OUTPUT**
True	**True**	**True**
True	**False**	**False**
False	**True**	**False**
False	**False**	**False**
OR		
INPUT 1	**INPUT 2**	**OUTPUT**
True	**True**	**True**
True	**False**	**True**
False	**True**	**True**
False	**False**	**False**
NOT		
INPUT	**OUTPUT**	
True	**False**	
False	**True**	

4. What are the values of the following expressions?

(5 > 4) and (3 == 5)

not (5 > 4)

(5 > 4) or (3 == 5)

not ((5 > 4) or (3 == 5))

(True and True) and (True == False)

(not False) or (not True)

Ans:

a) **False**
b) **False**
c) **True**
d) **False**
e) **False**
f) **True**

5. What are the six comparison operators?

Ans:

1. **Equal to (==)**
2. **Not equal to (!=)**
3. **Greater than (>)**
4. **Less than (<)**
5. **Greater than or equal to (>=)**
6. **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.

Ans: the equal to operator is two equal to signs (==)

assignment operators is single equal to signs (=)

Condition 1: Assigning a value to variable a = 5

Condition 2: using if statement

```
if (a==5):
    z = 6
```

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')
```

Ans: first block is variable assignment i.e. spam = 0

Second block is if statement i.e.

```
if spam == 10:
print('eggs')
if spam > 5:
print('bacon')
```

third block is else statement i.e.

```
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.

Ans:

```
if spam == 1:
    print("Hello")
else:
    if spam == 2:
        print("Howdy")
    else:
        print("Greetings!")
```

9.If your programme is stuck in an endless loop, what keys you'll press?

Ans: If I am using Jupyter notebook ill interrupt the kernel. Or press I twice or repeatedly.

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

Ans: The break statement immediately terminates the loop's execution, regardless of the loop condition or the number of iterations remaining.

The continue statement skips the current iteration and proceeds to 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)?

Ans: They will all generate same 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.

Ans: a)

```
for a in range(1, 11):
    print(a)
```

b)

```
number = 1
while number <= 10:
    print(number)
    number += 1
```

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

Ans: `spam.bacon()`