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

Ans: True and False

Using first letter with upper case T and F and rest of the word in lower case.

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

Ans:

1. or

2. and

3. 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).

Ans:

1. or truth table

True or True is True.
True or False is True.
False or True is True.
False or False is False.

2. and truth table:

True and True is True.
True and False is False.
False and True is False.
False and False is False

3. not truth table

not True is False.
not False is 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:

False

False

True

False

False

True

5. What are the six comparison operators?

Ans:

1. == (equal operator) **ex: a == b**

2. != (not equal) **ex: a != b**

3. > (Greater than) **ex: a>b**

4. < (less than) **ex: a<b**

5. >= (greater than or equal to) **ex: a>=b**

6. <= (less than or equal to) **ex: a<=b**

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

Ans:

== is the equal to operator that compares two values and evaluates to a Boolean either True or False

Ex: a == b

= is the assignment operator that stores a value in a variable.

Ex: X = 10

10 is stored in a X variable

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:

The three blocks are everything inside the if statement and the lines print('bacon') and print('ham'), print('eggs')

```
1. if spam == 10:

     print('eggs')
2. if spam > 5:
     print('bacon')
3. else:
    print('ham')
    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')

elif spam == 2:

print('Howdy')

else:

print('Greetings!')
```

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

Ans: Ctrl + c

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

Ans: Break statement is basically used to terminate the execution of loop or switch statement.

Break can be used with other block statements apart from the loops such as switch case.

Continue statement is used for the termination of current iteration not the whole loop. It allows the control to remain inside the loop, skip the current iteration and move to next iteration. Used only with loop statements.

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

Ans: They all do the same thing. The range(10) call ranges from 0 up to (but not including) 10, range(0,10) explicitly tells the loop to start at 0 , and range (0,10,1) explicitly tells the loop to increase the variable by 1 on each iteration.

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: using while loop:

```
i = 1

while(i<=10)

        print(i)

i+=1
```

Using for loop:

```
for i range of (1,11)

        print(i)
```

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

Ans: This function can be called with spam.bacon().