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

Ans. Two values are = Tue and False

It can only take the value which is true or false , when the value is true = 1 and false = 0

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

Ans.  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 ).

== Truth Table

| x | == | y | Returns |
| --- | --- | --- | --- |
| True | == | True | True |
| True | == | False | False |
| False | == | True | False |
| False | == | False | True |

AND Truth Table

| x | and | y | Returns |
| --- | --- | --- | --- |
| True | and | True | True |
| True | and | False | False |
| False | and | True | False |
| False | and | False | False |

OR Truth Table

| x | or | y | Returns |
| --- | --- | --- | --- |
| True | or | True | True |
| True | or | False | True |
| False | or | True | True |
| False | or | False | False |

NOT Truth Table

| not | x | Returns |
| --- | --- | --- |
| not | True | False |
| not | 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?

Ans  less than ( < ), less than or equal to ( <= ), greater than ( > ), greater than or equal to ( >= ), equal to ( == ), and not 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 “=” is an assignment operator is used to assign the value on the right to the variable on the left. The '==' operator checks whether the two given operands are equal or not

Condition – If programmer wants to assign a value of 10 to program then he/she will use ‘=’

Program = 10

Where as ‘==’ is used to check whther both are of same value or not

Eg Software = 10

Now to check if Program is equal to Software or not ‘==’ is used

Program = 10

Software = 10

Program == Software

Another  
*#eg.*

*# Equal To Operator*

**if**(2**==**3):

print("True")

**else**:

print("False")

*#Assignment operator*

c**=**1 *#here we have used assignment operator(=) to assign value of c which is 1*

print("c =",c)

False

c = 1

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 - ham

spam

spam

Its not printin eggs because spam is equal to 0 and not equal equal to 10 also it is not printing baon because 0 is smaller than 5

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

spam = 10

if spam > 1:

  print('Hello')

if spam > 2:

  print('Howdy')

else:

  print('Greetings')

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

Ans You can stop an infinite loop with **CTRL + C**

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

Ans  When **break** keyword comes, it terminates the execution of the current loop and passes the control over the next loop or main body, whereas when **continue** keyword is encountered, it skips the current iteration and executes the very next iteration in the loop

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

Ans outcome will be same in all three cases but =

0

1

2

3

4

5

6

7

8

9

range(10) = shows the total range from the begining

Here it shows the total range till 10

range(0,10) = it shows range from the 0 then 1 then 2…. Till 10

range(0,10,1) = it shows range from 0 to 10 with a interval of 1 in between

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 l = [1,2,3,4,5,6,7,8,9,10]

for i in l :

  print(i)

l = 1

while(l<=10):

    print(l)

    l += 1

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

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