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

. Answer --- True and False, using capital T and F, with the rest of the word in lowercase, like this True , False .

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

Answer--- 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 ).

Answer---

True and True is True.  
  
True and False is False.  
  
False and True is False.  
  
False and False is False.  
  
True or True is True.  
  
True or False is True.  
  
False or True is True.  
  
False or False is False.  
  
not True is False.  
  
not False is 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?

Answer – ==(equal to), != (not equal to), < (less than ), > (greater than), <= (less than equal to), and >= (greater than 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.

Answer---

== is the equal to operator that compares two values and evaluates to a Boolean, while = is the assignment operator that stores a value in a variable.

A condition is an expression used in a flow control statement that evaluates to a Boolean value.

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')

answer---

Everything inside the **if statement** is block of code , so here in this code three blocks are—

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

Answer----

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?

Will Press CTRL-C to stop a program stuck in an infinite loop.

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

* The main difference between both the statements is that 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.
* In simple words break statement leaves a loop, whereas the continue statement jumps to the next iteration.

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

The Python**range() function**returns a sequence of numbers, in a given range. The most common use of it is to iterate sequence on a sequence of numbers using loops.

## Syntax of Python range() function

***Syntax:****range(start, stop, step)*

***Parameter:***

* ***start****: [ optional ] start value of the sequence*
* ***stop:****next value after the end value of the sequence*
* ***step:****[ optional ]**integer value, denoting the difference between any two numbers in the sequence.*

***Return:****Returns a range type object.*

range (10) is equivalent to range (0, 10) because range () starts values from 0 by default .

so, both range (10) and range (0, 10) which returns [0,1,2,3,4,5,6,7,8,9]

range (0, 10, 1) also returns [0,1,2,3,4,5,6,7,8,9] because by default step count is 1

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)

i = 1

while(i<=10):

print(i)

i += 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().