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

Ans – True and False are two values of Boolean data type. You can write them by using the bool() in-built function.

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

Ans – Not, Or, And

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 – For NOT

|  |  |  |
| --- | --- | --- |
| Input | Operator | Output |
| True/1 | NOT | False/0 |
| False/0 | NOT | True/1 |

For AND & OR

|  |  |  |  |
| --- | --- | --- | --- |
| Input A | Input B | Operator | Output |
| True/1 | True/1 | AND | True/1 |
| True/1 | False/0 | AND | False/0 |
| False/0 | True/1 | AND | False/0 |
| False/0 | False/0 | AND | False/0 |
| True/1 | True/1 | OR | True/1 |
| True/1 | False/0 | OR | True/1 |
| False/0 | True/1 | OR | True/1 |
| False/0 | False/0 | OR | False/0 |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5)  
Ans – True and False = False

not (5 > 4)

Ans Not(True) = False

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

Ans- True or False = True

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

Ans – not(True) = False

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

Ans – True and False = False

(not False) or (not True)

Ans - True

5. What are the six comparison operators?

Ans – less than - <

Less than and equal to - <=

Greater than - >

Greater than and equal to - >=

Equal to - ==

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 equal to operator is written as == and assignment operator is written as =. For e.g a = 10 and b = 10 then equal to operator can be used to compare the variables a == b and assignment operator can be used to assign any value to the variable such as a = 2.

7. Identify the three blocks in this code:

Ans –

spam = 0

First block -

if spam == 10:

print('eggs')

Second block -

if spam > 5:

print('bacon')

Third block-

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 –

spam = int(input("Enter your input: "))

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 – A break statement in python alters the flow of a loop by terminating it once a specific condition is met. The continue statement skips the remaining code inside a loop for the current iteration only.

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

Ans – range(10) range(stop-10)- – the loop will iterate from 0 to 9 and range(0,10) – range(start-0, stop-10) – will also iterate the loop from 0 to 9. For range(0,10,1) – range(start-0, stop-10, step-1) – the loop will iterate from 0 to 9 and the step – 1 will denote difference between any two numbers in the sequence.

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 for loop 1 to 10

for i in range(1,11):

print(i)

While loop -

i = 1

while i < 11:

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?

Ans – spam.bacon()