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

Ans: The two values of Boolean data type are True and False.

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

Ans: The three different types of Boolean operators are ‘And’ , ‘or’ ,’not’ they are nothing but logical operators

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:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. No. | Value 1 | Operator | Value2 | output |
| 1 | True | AND | True | True |
| 2 | True | AND | False | False |
| 3 | False | AND | True | False |
| 4 | False | AND | False | False |
| 5 | True | OR | True | True |
| 6 | True | OR | False | True |
| 7 | False | OR | True | True |
| 8 | False | OR | False | False |
| 9 | True | NOT | - | False |
| 10 | False | NOT | - | 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:

|  |  |  |
| --- | --- | --- |
| **Operator** | **Name** | **Example** |
| == | Equal | x == y |
| != | Not equal | x != y |
| > | Greater than | x > y |
| < | Less than | x < y |
| >= | Greater than or equal to | x >= y |
| <= | Less than or equal to | x <= y |

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 difference between ‘equal to ‘ and ‘assignment ‘ operator is that ‘equal to ‘ operator check the equality of two variables and returns Boolean output in returns whereas assignment operator assigns a variable name to given 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')

Ans:

block 1)

if spam == 10:

print('eggs')

block2)

if spam > 5:

print('bacon')

block3)

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())

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: We will use  **CTRL + C**  or **interrupt the kernel key** to break the loop

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

Ans: break is used when we want to stop iteration of loop once our condition is satisfied,

Continue is used when we want to do nothing or skip that iteration when our condition is satisfied.

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

Ans: In particular there is no difference between range(10), range(0, 10), and range(0, 10, 1).

All will generate produce a sequence of integers from start (inclusive) to stop (exclusive) by 1 step increment.

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:

# 1) by using for loop

for i in range(0,11):

print(i)

# 2) By using while loop

num = 0

while num<=10:

print(num)

num = num+1

if num>10:

break

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

Ans : we will first import function from module spam then simply call it using function name bacon() ,with arguments if it has any.