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

The two values of the Boolean data types are True and False.

a = True

b = False

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

The three different types of Boolean operators are and , or & 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 ).

AND operator truth table

|  |  |  |
| --- | --- | --- |
| X | Y | X and Y |
| False | False | False |
| True | False | True |
| False | True | True |
| True | True | True |

OR operator truth table

|  |  |  |
| --- | --- | --- |
| X | Y | X or Y |
| False | False | False |
| True | False | False |
| False | True | False |
| True | True | True |

NOT operator

NOT X = Y

NOT Y = X

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?

The six comparison operators in python are:-

1. Less than (<)
2. Greater than (>)
3. Less than equal to (<=)
4. Greater than equal to (>=)
5. Equal to (==)
6. 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.

The difference between the equal to and assignment operators are mentioned below:-

Equal to → This operator is used to compare two values on the either side. It will only return true, if the values on the both side are equal.

Eg :- a = int(input(“Enter the first value”))

b= int(input(“Enter the second value”))

If (a == b)

print(“Both values are equal)

Else

print(“Both have different values”)

Assignment operator : - These operators assign value to a variable.

Eg :- a = 10

= → Assignment operator

7. Identify the three blocks in this code:

spam = 0

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if spam == 10:

print('eggs') First block

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if spam > 5:

print('bacon') Second block

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else:

print('ham')

print('spam') Third block

print('spam')

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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.

spam = int(input("Enter a number"))

if (spam == 1):

print("Hello")

if (spam == 2):

print("Howdy")

elif (spam > 2):

print("Greetings")

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

Ctrl + C

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

Break keyword in a program helps in to exit or ‘break’ from a for or while conditional loop.

When a break keyword is encountered, it stops the execution of the current loop and passes the control over the next loop or main body.

Continue keyword is used to skip code within a loop for certain iterations of the loop.After the code is skipped, the loop continues where it left off.

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

There is no difference between the output if we use any range in a for loop.

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.

#Short program to print the numbers 1 to 10 using a for loop

i =[x for x in range(1,11)]

print(i)

#Program that prints number 1 to 10 using a while loop

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 as spam.bacon()