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

Ans. Following are two values which always start with capital ‘T’ & ‘F’

1. True
2. False

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

Ans.

1. and
2. or
3. 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).

Ans.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **A** | **B** | **A and B** | **A or B** | **not A** |
| True | False | False | True | False |
| True | True | True | True | False |
| False | False | False | False | False |
| False | True | False | True | True |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5)

Ans. False

not (5 > 4)

Ans. False

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

Ans. True

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

Ans. False

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

Ans. False

(not False) or (not True)

Ans. True

5. What are the six comparison operators?

Ans.

|  |  |  |
| --- | --- | --- |
| 1 | Equal | == |
| 2 | Not equal | != |
| 3 | Greater than | > |
| 4 | Less than | < |
| 5 | Greater than or equal to | >= |
| 6 | Less than or 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.

Equal to operator is generally used for comparison in conditional statements where result value is always boolean

Example.

if x == 5:

Equal assignment operator is generally used to assign the value to variable or in mathematical expressions.

Example.

x=6

x = x + 5

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')

**Block 2**

if spam > 5:

print('bacon')

**Block 3**

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.

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. ‘break’ statement is generally used to end the loop and ‘continue’ statement is generally used skip the current iteration in the loop and switch to the next iteration

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

Ans. There is no difference. Iteration will execute from 0 to 9 (0,1,2,3,4,5,6,7,8,9)

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.

**Using for loop**

For i in range(10):

Print(i +1)

**Using a while loop**

i=1

While i <= 10:

Print(i)

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()