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

A: Two values are True and False, in Python they’re written as “ ”.

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

A: 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 ).

A:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| INPUT | | OUTPUT | | | | | |
| A | B | AND | NAND | OR | NOR | XOR | XNOR |
| 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |

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?

A : equal to, not equal to, greater than, greater than or equal to, less than, and 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.

A : Equal, equal to for comparison or as condition we use double equals in successive iterations(==).  
To assign a value to variable we use single equal to sign(=)

Ex. If 5==3 : checking if 5 is equal to 3.

A = 5, assigning value 5 to a variable ‘A’

7. Identify the three blocks in this code:

spam = 0

if spam == 10: First If statement : condition check T/F

print('eggs')

if spam > 5: Second If statement : condition check T/F

print('bacon')

else: Third else statement : condition check, if earlier all fail

print('ham')

print('spam')

print('spam') : out put

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 = 2

if spam == 1 :

    print('Hello')

if spam == 2 :

    print('Howdy')

else:

    print('Greetings!')

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

A :Ctrl+ C

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

A : Break is used to stop and exit the loop immediately.

Continue, is used to terminate the current iteration and get in to the next iteration

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

A : Range (10), returns values from 0 till 10, but not 10 :0-9

Range(0,10), returns values from start(0) till (10), 9 : 0-9

Range(0,10,1) starts at ‘0’, till ‘10’, In steps of 1 : 0-9

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.

A : #range(10), range(0, 10), and range(0, 10, 1)

for y in range(1,11):

    print(y)

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?

A : spam.bacon()