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

True and False

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

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.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Boolean operator | First input | | Second input | | Output |
| AND | 0 | | 0 | | 0 |
| 0 | | 1 | | 0 |
| 1 | | 0 | | 0 |
| 1 | | 1 | | 1 |
| Boolean operator | First input | | Second input | | Output |
| OR | 0 | | 0 | | 0 |
| 0 | | 1 | | 1 |
| 1 | | 0 | | 1 |
| 1 | | 1 | | 1 |
| Boolean operator | | Input | | Output | |
| NOT | | 0 | | 1 | |
| 1 | | 0 | |

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?

== , != , > , < , >= , <=

6. How do you tell the difference between the equal to and assignment operators? Describe a condition and when you would use one.

Equal to is an comparison operator which compare the two values and an assignment operator is used to assign a value to a variable.

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: -

|  |  |  |
| --- | --- | --- |
| First Block | Second Block | Third Block |
| if spam == 10:  print('eggs') | if spam > 5:  print('bacon') | 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.

spam = input(int(“Enter a number:”))

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?

Ctrl + c

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

“break” terminates the loop if the condition is true and “continue” moves to the next iteration if the condition is true.

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

range(10), range(0, 10), and range(0, 10, 1) all have the same input.

Range(10) - here only end of the series is defined

Range(0,10) - here both start and end are defined

Range(0,10,1) - here start, end and jump of the series are defined

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.

for i in range(1,11):

print(i)

a = 1

while a<=10:

print(a)

a = a + 1

continue

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

spam.bacon()