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

* True and False are two values of Boolean data type.
* we can assign boolen values to variables, flag = True, flag = False. There are many ways to assign bool values to variables Ex. using relational operators, in operator.

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

* Relational Operators -> ==, >=, >, < , <=, !=.
* Using in operator -> var = 1 in [1, 2, 3]
* using not operator -> var = not True, not 0.
* using and , or operator -> (True and False)

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 | B | A==B | A!=B | A>=B | A>B | A<=B | A<B | not A | A in [0, 1, 2] |
| 0 | 5 | False | True | False | False | True | True | True | True |
| 5 | 5 | True | False | True | False | True | False | False | False |
| 6 | 5 | False | True | True | True | False | False | False | False |
| True | False | False | True | True | True | False | False | False | True |

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 operator will have two = symbols and Assignment operator have only one =.
* equal to operator used to make comparision between data. (5 == 6)
* Assignment operator used to store data in variable (var = True)

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs') // block-1

if spam > 5:

print('bacon') // block-2

else:

print('ham') // block-3

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 = 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?

* ctrl + c

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

* Break statement is used to break the loop and comes out of loop
* Continue statment is to skip the current iteration/ execution.

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

* All the three syntax returns a list from 0 to 9 and the difference is only the provided syntax.
* range(start\_value, end\_value, step) -> default values for start\_value is 0 and step value is 1
* Above is syntax for range function and it returns list.

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)

* i = 1

while(i < 11):

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?

* Calling a function from another package depends on import statement.
* import spam

var = spam.bacon()

* from spam import bacon

var = bacon()