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

Boolean variables are defined by the *True* and *False* keywords. The keywords True and False

must have an uppercase first letter. The output <class ‘bool’> indicates the variables is a Boolean data type.

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 ).

|  |  |  |  |
| --- | --- | --- | --- |
| True | And | False | False |
| True | And | True | True |
| False | And | True | False |
| False | And | False | False |

|  |  |  |  |
| --- | --- | --- | --- |
| True | Or | False | True |
| True | Or | True | True |
| False | Or | True | True |
| False | Or | False | False |

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?

(==) 🡪 equal to (!=) 🡪 not equal to

(<) 🡪 less than (>) 🡪 greater than

(<=) 🡪 less than or equal to (>=) 🡪 greater 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.

= operator is used to assign value to a variable and == operator is used to compare two variable.

Example of assignment operator:

x= 4

y= 5

print(x + y)

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')

**spam = 0**

**if spam == 10: -🡪 first block**

***print('eggs')***

***if spam > 5: 🡪 Second block***

**print('bacon') 🡪 Third block**

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()

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 statement leaves a loop. Whereas the continue statement jumps to the next iteration.

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

There are three parameters inside the range(): **start, stop, step.**

**Star**t: An integer number that specifies where to start.

**Stop**: (This parameter is required whereas the other two are optional).An integer number

that specifies where to stop.

**Step**: An integer number that specifies how much to increment the number.

range(10) 🡪 the value 10 indicates the stop value for the range function. And 0 is by default added as the starting value.

range(0,10) 🡪 here the start value has been indicated.

Range(0,10,1) 🡪 start, stop and step integers are mentioned . out put is same in all the three scenarios.

Output: 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.

**i = 1**

**while (i <=10):**

**print(i)**

**i = i +1**

**for i in range (1,11):**

**print (i)**

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

The function can be called with

Spam.bacon()