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

*True and False.Boolean expressions use relational and logical operators. The result of a Boolean expression is either true or false.*

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

*AND, OR, and 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 ).

OR

|  |  |  |
| --- | --- | --- |
| Input 1 | Input 2 | Output |
| True | False | True |
| True | True | True |
| False | True | True |
| False | False | False |

AND

|  |  |  |
| --- | --- | --- |
| Input 1 | Input 2 | Output |
| True | False | False |
| True | True | True |
| False | True | False |
| False | False | False |

NOT

|  |  |
| --- | --- |
| Input | Output |
| True | 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?

*> , < , >= , <= , == , and !=*

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

*= or Assignment operator is used to assign a value to a variable. Whereas equal to or == is used to compare two values/variables.*

For eg –

a = 10; --We are assigning value 10 to a.

5 == 5 --We are comparing the values and it will return True.

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*

*\*\*\*\*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.

*spam = input("Enter the value")*

*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 resumes the control of the program to the end of loop and made executional flow outside that loop. Continue statement resumes the control of the program to the next iteration of that loop enclosing 'continue' and made executional flow inside the loop again*

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

*range(stop) takes one argument.*

*range(start, stop) takes two arguments.*

*range(start, stop, step) takes three arguments.*

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)*

*While loop -*

*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? *🡪 spam.bacon()*