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

A) Two values of Boolean data type are True and False. Where True denotes 1 and false denotes 0.

and they can be declared in python as a=True and b=False.

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

A) Boolean operators are ‘and’, ‘or’ and ‘not’.

**And** returns True when all statements gets true otherwise it returns false and **Or** returns true when any one of all statements gets true otherwise it returns false. **Not** will returns true when statement returns false and it will returns false if statement will return true

Eg. print((10>3)and(30<100))🡪returns True

print((10>3)or(3<1))🡪returns true

print(not(10<3))🡪returns true

**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 ).**

AND

|  |  |  |
| --- | --- | --- |
| input | input | Output |
| T | T | T |
| T | F | F |
| F | T | F |
| F | F | F |

OR

|  |  |  |
| --- | --- | --- |
| input | input | Output |
| T | T | T |
| T | F | T |
| F | T | T |
| F | F | F |

NOT

|  |  |
| --- | --- |
| input | Output |
| T | F |
| F | T |

**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)** 🡪False

5. What are the six comparison operators?

A) Six comparative opeators are

* Greater than (>)
* Lesser than(<)
* Greater than or equal to(>=)
* Lesser than or equal to(<=)
* Equal to(==)
* Not 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)Assignment operator(=) is used to assigned value to the variable where as equal-to operator(==) is used to check the condition whether to statements/value/variables are equal or not. It returns True with both are equal and False if both are not equal

7. Identify the three blocks in this code:

spam = 0🡪 **first block**

if spam == 10:🡪**second block**

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')🡪**third block**

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.

A) *If(spam==1):*

*print(“Hello”)*

*elif(span==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 keyword is used to exit from entire loop statements and coutinue is used to ignore next statements in current loop and countinue the execution from next loop onwards

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

A)range(10)🡪creates a sequence from 1 to 9

range(0,10)🡪creates a sequence from 0 to 9

range(0,10,1)🡪creates a sequence from 0 to 9 and each sequence it will increcemts buffer value by 1 interger

**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)for loop

*for i in range(1,10):*

*print(i)*

(ii) while loop

*i=1*

*while i>10:*

*print(i)*

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

A) *import span as sp*

*sp.bacon()*