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

Ans: True/ False are the 2 values of the boolen data type . they denote 1(True)/2(False)

Denoted by bool()

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

Ans: there are 3 types of Boolean operators:

And—it ties to check if both the condition are true then returns a true result else will return false

Or: it tries to check if any of the condition is true then returns a true , else return false

Not:- it negates the existing condition

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 | |  |  |  | | --- | --- | --- | | True | True | True | | True | False | False | | False | True | False | | False | False | False | |
|  | |
| Or | |  |  |  | | --- | --- | --- | | True | True | True | | True | False | True | | False | True | True | | False | False | False | |
|  | |
| Not | |  |  | | --- | --- | | 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?

|  |  |
| --- | --- |
| > | Greater than |
| >= | Greater than equal |
| < | Less than |
| <= | Less than equal |
| == | Equal |
| != | Not equal |

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

Ans: equal to is denoted by “==”: this is the logical operator, used to compare the equality between 2 values

eg: for 1==2 print false else true 🡪 this will compare if 1 is equal to 2 and print false if true else will print false

Assignment is denoted by “=”: it is used to assign a value to a variable

Eg: age=18 🡪 this will assign age variable with a default value 18

7. Identify the three blocks in this code:

|  |  |
| --- | --- |
| spam = 0 | Block 1, where spam is assigned value =0 |
| if spam == 10:  print('eggs') | Block 2 |
| if spam > 5:  print('bacon')  else:  print('ham')  print('spam')  print('spam') | Block 3 |

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.

Ans:

spam=1

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?

Ans : Ctrl+C can break the endless loop

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

Ans:

Break: whenever the python code runs and it interacts with the break statement, then it will come out of the that loop , and then continue with the execution of the program which is outside that loop.

Continue: whenever the python code runs and it interacts with the continue statement then it will come out of that particular iteration of the loop and will continue with the next iteration.

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

Ans: for the for loop , all the 3 codes i.e. range(10), range(0,10) and range(0,10,1) will have the same output, as range(start, end, step)🡪 start default value is 0, step default value is 1

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.

Ans:

|  |  |
| --- | --- |
| For loop | for i in range(10):  print(i+1) |
| While loop | i=1  while i <=10:  print(i)  i+=1 |

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

Ans : from spam import bacon