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

Ans: 0 and 1. True and False

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

Ans: 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 ).

Ans: AND GATE

|  |  |  |
| --- | --- | --- |
| **A** | **B** | **A AND B** |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

OR GATE

|  |  |  |
| --- | --- | --- |
| **A** | **B** | **A OR B** |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |

NOT GATE

|  |  |
| --- | --- |
| **A** | **B** |
| 0 | 1 |
| 0 | 0 |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5)

Ans: FALSE

not (5 > 4)

Ans: FALSE

(5 > 4) or (3 == 5)

Ans: TRUE

not ((5 > 4) or (3 == 5))

Ans: FALSE

(True and True) and (True == False)

Ans: FALSE

(not False) or (not True)

Ans: TRUE

5. What are the six comparison operators?

Ans: <, >, ==, <=, =>, and !=

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

Ans: a==b (double equals to for comparison), a=10 (equal for assignment). When we want to check whether two variables values are equal we use equal to operator and assignment is used when we want to store some value to a variable.

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.

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

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

Ans: Break is used when user wants to come out of a block and continue is used when user want to skip one case and wants to move to next possibility.

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

Ans: There is no difference, and all will print 0 to 9 numbers with an increment step of 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(1,11):

print(i)

While Loop

i=1

while i<=10:

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?

Ans: 1. create a spam.py file in jupyter.

2. create bacon function inside it.

3. create notebook and import spam.py as import spam.

4. use spam to call bacon function as spam.bacon().