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

Ans. true and false

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

Ans. 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 evaluates).

Ans.

|  |  |
| --- | --- |
| **NOT** | |
| **A** | **not A** |
| 0 | 1 |
| 1 | 0 |

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

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

4. What are the values of the following expressions?

Ans.

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

not (5 < 4) ***True***

(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?

Ans. ==, !=, >, <, >=, <=

6. How do you tell the difference between the equal to and assignment operators? Describe a

condition and when you would use one.

Ans.

Assignment operators are used to assign values to variables. The “=” is an assignment operator is used to assign the value on the right to the variable on the left.

E.g. x = 5

The '==' or Equal to operator checks whether the two given operands are equal or not. If so, it returns true, else it returns False.

E.g. 5==5

7. Identify the three blocks in this code:

Ans.

spam = 0

if spam == 10: #1 block1

print(‘eggs’)

if spam > 5: #2 block2

print(‘bacon’)

else: #3 block3

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.

Ans.

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. Both “break” and “continue” are the ‘jump’ statements, that transfer control of the program to another part of the program. The main difference between break and continue is that break is used for immediate termination of loop. On the other hand, ‘continue’ terminate the current iteration and resumes the control to the next iteration of the loop.

The break statement is primarily used as the exit statement, which helps in escaping from the current block or loop. Conversely, the continue statement helps in jumping from the current loop iteration to the next loop.

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

Ans. No difference, all three takes’ values starting from 0 to 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.

Graphical user interface, text

Description automatically generated with medium confidenceText

Description automatically generatedAns.

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

importing spam?

Ans. This function can be called with spam.bacon().