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

Ans: True and False. They can be declared directly like a=True and b=False

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

Ans: and, or and not are the three logical Boolean operator.

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 operator:

|  |  |  |
| --- | --- | --- |
| A | B | A&&B |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

Or Operator:

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

Not operator:

|  |  |
| --- | --- |
| Input | Output |
| 0 | 1 |
| 1 | 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: a == b (Equals)

A < B (Less than)

A > B (Greater than)

A !=(<>) B (not equal to)

A >= B (Greater than equal to)

A <= B (Less than 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.

Ans: equal to contains 2 equals symbol and assignment operator contains 1 equals symbol.

Assignment operator will be used when declaring and assigning variable and expressions. (Variable declaration, loops)

Equals to will be used in decision making statements (if,if..else, nexted if)

7. Identify the three blocks in this code:

spam = 0 (Variable Declaration and value assignment)

if spam == 10: (First If condition block)

print('eggs')

if spam > 5: (Second If condition block)

print('bacon')

else: (Else block for second if section)

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 = int(input())

if(spam == 1):

print("Hello")

elif(spam == 2):

print("Howdy")

else:

print("Greetings!")

Note: The code is not complaint to handle any other datatype except int for input.

Using check before conversion or try.. except for better code handling.

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- will terminate the loop and execute the statements after loop.

Continue- will continue the execution to the next iteration of the loop.

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

Ans: All three are same and will iterate the loop from 0 till 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.

Ans:

for i in range(1,11):

print(i)

for i in range(1,11,1):

print(i)

Using While:

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: function can be called using the function name, in this case bacon() will invoke the function after importing the spam module.