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

**Answer:** True and False are the two values of Boolean data type.

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

**Answer:** AND, OR, NOT are three types of Boolean operators.

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).

**Answer:**

Truth table - AND

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

Truth table - OR

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

Truth table - NOT

|  |  |
| --- | --- |
| A | Output |
| 0 | 1 |
| 1 | 0 |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5) = 0

not (5 > 4) = 0

(5 > 4) or (3 == 5) = 1

not ((5 > 4) or (3 == 5)) = 0

(True and True) and (True == False) = 0

(not False) or (not True) = 1

5. What are the six comparison operators?

**Answer:** >, <, ==, !=, >=, <=

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

**Answer:**

Equal to operator is used when we want to compare two values.

Eg: a = 5, b = 10

if(a == b) – here for comparing a and b values equal to operator is used

assignment operator is used when we want to assign a value to the variable.

Eg: int a;

a = 10 – here assignment operator is used to assign value to the variable

7. Identify the three blocks in this code:

spam = 0

|  |
| --- |
| if spam == 10:  print('eggs') |

Block one

|  |
| --- |
| if spam > 5:  print('bacon') |

Block two

|  |
| --- |
| else:  print('ham')  print('spam')  print('spam') |

Block three

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.

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?

CTRL+C is pressed to interrupt a program that is running in infinite loop

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

Break statement stops the execution in the current loop and come out of it.

Continue is used for skipping the next statement and continue the execution.

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

There is no difference among all three ways of using range function. All returns 0 to 9 values.

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.

for i in range(0,10):

Print(i)

**Code with while loop**

i = 1

n=10

while i < (n+1):

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?

spam.bacon()