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

two values are **True** or **False**

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

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 ).

this is just like “and” “or” ‘not” gate in 12 physics

for and : for or: for Not:

F-F-F F-F-F if false -> true

F-T-F F-T-T if true -> false

T-F-F T-F-T

T-T-T T-T-T

4. What are the values of the following expressions?

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

not (5 > 4)

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

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

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

(not False) or (not True)

**ans**

(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?

**ans**

six comparison operators are:

== ,equal to

!=, not equal too

a > b, greater than

a<b, less than

a>=b, greater than or equal too

a<=b, less than or equal too

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

**ans:**

consider x = 3

here x is assigned a value 3

if we do

x == 5 it’ll return false as 3 is not equal to 5 ,== compares the two values

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')

**ans:**

**BLOCK1**

if spam == 10:

print('eggs')

**Block 2**

if spam > 5:

print('bacon')

**BLOCK 3**

else:

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:**

def some\_function():

spam = int(input("enter anything btwn 1 and 10: "))

if spam == 1:

print('Hello')

if 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:**

when using ‘break’ the loop stops completely even if there is another while or for or any if ,else expression in the same indent , in ‘continue’ the present loop just gets skipped after a condition is met and rest of the program in that same indent goes on as usual

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

**ans**

range(start, stop, step) : these are the parameters in range() functions hence all three functions will return the same values (0 to 9) just parameters in all 3 are different

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**

x = 0

while x<10:

x +=1

print(x)

same using for loop

for x in range(1,11):

print(x)

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

import spam

spam.bacon()

or

from spam import bacon