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

True , False are the two types of Boolean data types.

Eg: a = True

b = False

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

AND, OR, NOT are the 3 basic Boolean operators.

Eg : True and True

Results : True

True and not False

Results : True

True and False

Results : False

**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 ).**

**True and True**

Results : True

**True and False**

Results : False

**False and True**

Results : False

**False and False**

Results : False

**True or True**

Results : True

**True or False**

Results : True

**False or True**

Results : True

**False or False**

Results : False

**not True**

Results : False

**not False**

Results : True

**4. What are the values of the following expressions?**

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

Results : False

**not (5 > 4)**

Results : False

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

Results : True

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

Results : False

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

Results : False

**(not False) or (not True)**

Results : True

**5. What are the six comparison operators?**

> : Greater than, Eg : 6>3

< : Less than, Eg : 3<6

>= : Greater than or equal to, Eg : 6>=3

<= : Less than or equal to, Eg : 3<=6

== : Equal to, Eg : 3==3.0

!= : not Equal to, Eg : 3!=6

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

**Describe a condition and when you would use one.**

Equal to : (==) it is used to compare the values

Assignment operator : (=) it is used to assign a value to a variable

Eg : I want to assign 2 values to variables and compare them

A = 10

B = 20

A==B

Results : False

**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')**

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.

spam = int(input('Enter a number : '))

if spam == 1:

print('Hello') #🡨 Block 1

elif spam == 2:

print('Howdy') #🡨 Block 2

else:

print('Greetings!') #🡨 Block 3

**9.If your programme is stuck in an endless loop, what keys you’ll press?**

Interrupt the kernel

 (The key which is next to Run button )

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

Break : When a given condition is met it will come out of the loop

Eg :

for i in range(5):

if i == 2:

break

print(i)

Results :

0

1

Continue : When a given condition is met it will skip that iteration and again go back to the loop

Eg :

for i in range(5):

if i == 2:

continue

print(i)

Results :

0

1

3

4

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

range(10), range(0, 10), and range(0, 10, 1) results the same output ( 0 to 9 )

range(10) : we are defining the upper bound value so that lower bound value is 0

range(0, 10) : we are defining the lower bound and upper bound value so that the output starts from lower bound value and goes till upper bound excluding upper bound value

range(0, 10, 1) : we are defining the lower bound, upper bound and step value so that the output starts from lower bound value and goes till upper bound excluding upper bound value in incremental step 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.**

**For loop**

for i in range(1,11):

print(i)

**While loop**

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?

spam.bacon()