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

Ans: Boolean data type have two values

1. True

2. False

Example:

m = True

type(m)

This will produce class ‘bool’.

n = false

type(n)

This will produce class ‘bool’.

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

Ans: 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).

Truth table of AND operator

Inputs		Output
False	False	False
True	False	False
False	True	False
True	Ture	True

Truth table of OR operator

Inputs		Output
False	False	False

True	False	True
False	True	True
True	Ture	True

Truth table of NOT operator

Input	Output
False	True
True	False

4. What are the values of the following expressions?

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

True and False = False

not (5 > 4)

not True = False

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

True or False = True

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

not (True or False) = not True = False

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

True and False = False

(not False) or (not True)

True or False = True

5. What are the six comparison operators?

Operator	Description	Example
>	Greater than operator. True if left side operand is greater than right side operand	a = 5 b = 3 print(a>b) Output: True
<	Less than operator. True if left side operand is lesser than right side operand	a = 3 b = 5 print(a<b) Output: True
>=	Greater than or equal to operator. True if left side operand is greater than or equal to right side operand	a = 5 b = 3 print(a>=b) Output: True
<=	Less than or equal to operator. True if left side operand is lesser than or equal to right side operand	a = 3 b = 5 print(a<=b) Output: True
==	Equal to operator. True if left side operand is equal to right side operand	a = 3 b = 3 print(a == b) Output: True
!=	Not Equal to operator. True if left side operand is not equal to right side operand	a = 3 b = 3 print(a != b) Output: False

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 operator is denoted by '==' But assignment operator is denoted by '='

Example : a = 10 this means in memory 10 is stored in a particular memory location and the name of that location is denoted by a variable a.

Whereas a == b means the operands a and b both are equal.

a = 10

b = 10

print(a == b)

Output: True

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')

```
# Assignment_2_Q.7
spam = 6
if spam == 10:
  print('eggs')
if spam > 5:
  print('bacon')
else:
  print('spam')
```

```
bacon
```

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 the value in spam"))
if spam == 1:
  print("Hello")
elif spam == 2:
  print("Howdy")
else:
  print("Greetings!")
```

```
Enter the value in spam1
Hello
```

```
spam=int(input("Enter the value in spam"))
if spam == 1:
  print("Hello")
elif spam == 2:
  print("Howdy")
else:
  print("Greetings!")
```

```
Enter the value in spam2
Howdy
```

```
spam=int(input("Enter the value in spam"))
if spam == 1:
  print("Hello")
elif spam == 2:
  print("Howdy")
else:
  print("Greetings!")
```

```
Enter the value in spam5
Greetings!
```

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

Ans : An infinite loop occurs when a program keeps executing within one loop, never leaving it. To exit out of infinite loops on the command line, press CTRL + C . Save the program and run it.

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

Ans:

Break statement: Break statement terminates a loop where it is running and move the control immediately after the body of the loop

Example

```
a = "suman das"
for i in a:
  if i == " ":
    break
  print(i, end = '')
```

```
suman
```

Continue statement: The continue statement is used to skip the rest of the code inside a loop for the current iteration only. Loop does not terminate but continues with the next iteration.

```
a = "suman das"
for i in a:
  if i == " ":
    continue
  print(i, end = '')
```

```
sumandas
```

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

range (10) means by default it is starting from 0 and it will end at 9. By default, step size 1.

Range (0,10) means its starting point is 0 and ending point is 9. By default, step size 1.

Range (0,10,1) means its starting point is 0, the ending point is 9 with a step size 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 i in range(1,11):
  print(i, end = ' ')
```

```
1 2 3 4 5 6 7 8 9 10
```

```
i = 1
while(i<=10):
    print(i, end = ' ')
    i += 1
```

```
1 2 3 4 5 6 7 8 9 10
```

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

Ans: spam.bacon()