

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

Answer :-

True - It is considered to be a positive sign or 1 to do some operations. We can write it like **True**

False- It is considered to be a negative sign or 0 to do some operations. We can write it like **False**

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

Answer :- 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).

AND : -

A	B	Result
TRUE	TRUE	TRUE
TRUE	FALSE	FALSE
FALSE	TRUE	FALSE
FALSE	FALSE	FALSE

OR :-

A	B	Result
TRUE	TRUE	TRUE
TRUE	FALSE	TRUE
FALSE	TRUE	TRUE
FALSE	FALSE	FALSE

NOT :-

A	Result
TRUE	FALSE
FALSE	TRUE

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?

Answer :- >, <, ==, !=, >=, <=

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

== → this is an equality operator when you want to check equality between two numbers then we can use this operator. e.g, 7 == 7 -> True , 5 == 8 -> False

= → this is an assignment operator which will assign the value to some variable. e.g, var_a = 6

Here var_a is a variable which is holding a value of 6 in it.

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')
```

Answer :- Two If blocks and one else block

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.

Answer :-

```
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?

Answer :- Ctrl + C

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

Answer :- break - If break runs then it will not allow the program to run further and it will break the loop.

continue - It will skip the underneath program whenever the continue statement runs. It will exclude or ignore the remaining flow and continue from the first line of the program.

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

Answer :- range(10) - it will start with 0 and go till last number minus one which is 9. Even though we haven't mentioned the starting point, python will automatically take 0 as default starting point.

range(0, 10) - It will start with 0 and go till the last number minus one which is 9. We have mentioned the starting point as 0 explicitly.

range(0, 10, 1) - It will start with 0 and go till the last number minus one which is 9. We have mentioned the starting point as 0 explicitly and also we have mentioned the step value(third value in the range) which will tell us step value of how much we need to go from first number to next number likewise(difference of numbers).

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.

Answer :-

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`?

Answer :- `spam.bacon()`