

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

**Answers** – TRUE & FALSE are the two values of the Boolean data types.

We can write them as : True , False . I mean Initials in uppercase, rest in lowercase

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

**Answers** – AND , OR & NOT are the three different 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 evaluates to).

**Answer** – True and True is True.

True and False is False.

False and True is False.

False and False is False.

True or True is True.

True or False is True.

False or True is True.

False or False is False.

not True is False.

not False is True.

4. What are the values of the following expressions?

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

not  $(5 > 4)$

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

not  $((5 > 4) \text{ or } (3 == 5))$

$(\text{True and True})$  and  $(\text{True} == \text{False})$

(not False) or (not True)

**Answer –** False

False

True

False

False

True

5. What are the six comparison operators?

**Answers --** ==, !=, <, >, >=, <= are the six comparison operators.

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

**Answers -** == is the equal to operator , it compares two values and evaluates in Boolean

= is the assignment operator , it assigns values to a variable such a = 5 means value 5 is stored in a

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')
```

**Answers –**

```
print('eggs')  
if spam > 5:  
    print('bacon')  
else:  
    print('ham')  
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.

**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?

**Answers –** CTRL + C to interrupt the Kernel.

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

**Answer -** The main difference between break and continue statement is that when break keyword is encountered, it will exit the loop. In case of continue keyword, the current iteration that is running will be stopped, and it will proceed with the next iteration.

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

**Answers –** there is no difference I think. Range function works : range(start, stop, step size)

if starting point is not mentioned then it takes 0 as by default and same thing will happen with step size , mean step size is not mentioned so it takes step size as 1.

Here range(10) : starting point and step size is not mentioned so it takes 0,1 respectively.

For range(0,10) : starting point , ending point is mentioned but step is not mentioned so it takes 1 as default step size.

Lastly range(0,10,1) here everything is mentioned properly.

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.

**Answers –** For Loop - for i in range(1,11):

print(i)

while loop - i = 1

while i <= 10:

print(i)

i = i+1

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

**Answers –** spam.bacon()