

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

Ans: The two values of the Boolean data type are “True” and “False” here first letter with Capital ‘T’ and ‘F’ and the rest of the characters in lower case.

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

Ans: Different types of operators are: 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).

Ans:

“AND”

- True and True = True
- True and False = False
- False and True = False
- False and False= False

“OR”

- True or True = True
- True or False = True
- False or True = True
- False or False = False

“NOT”

- not True = False
- not False = True

4. What are the values of the following expressions?

(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:

- >=
- <=
- ==
- !=
- >
- <

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

Ans:

- Equal is used to compare two values and then evaluates to Boolean.
- Assignment operator stores a value in a variable.

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: The three blocks are inside the if statement:

```
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.

Ans:

```
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?

Ans:If programme is stuck in an endless loop then I'll press Ctrl-C

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

Ans:

- Break statement will move execution outside and just after the loop.
- The continue statement will move the execution to the start of the loop.

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

Ans: range(10) will call ranges from 0 upto but not including 10.

range(0,10) will execute the loop to start at 0.

range(0,10,1) will tell the loop to increase the variable value by 1 on each iteration.

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:

“for loop”

```
for i in range(10):
```

```
    i += 1
```

```
    print("The numbers from 1 to 10 are:",i)
```

“while loop”

```
i = 1
```

```
while i <= 10:
```

```
print("The numbers from 1 to 10 are:",i)
```

```
i += 1
```

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

Ans `spam.bacon()`