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

**Answer:** The two values of Boolean data type are:  
True: represents when the condition is met  
False: represents when the condition is not met

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

**Answer:** The three different types of Boolean operators are:  
Logical OR (represented as ‘or’)  
Logical AND (represented as ‘and’)  
Logical NOT (represented as ‘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 ).**

**Answer:** Logical OR

| **Operand 1** | **Operand 2** | **Result** |
| --- | --- | --- |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

Logical AND

| **Operand 1** | **Operand 2** | **Result** |
| --- | --- | --- |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

Logical NOT

| **Operand** | **Result** |
| --- | --- |
| True | False |
| False | 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) or (3 == 5))

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

(not False) or (not True)

**Answer:**(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?**

**Answer:** The six comparison operators are:  
Equal to (represented as ‘==’)  
Not equal to (represented as ‘!=’)  
Greater than (represented as ‘>’)  
Less than (represented as ‘<’)  
Greater than or equal to (represented as ‘>=’)  
Less than or equal to (represented as ‘<=’)

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

**Answer:** The equal to (‘==’) operator is used for comparison purposes where it checks if two values are equal or not.   
Example: x=2, y=3  
x==y  
Gives output as False coz the value of x and y are different.

Whereas, the assignment operator (‘=’) is used to assign any values to variables.  
Example: x=2, y=x+2  
Gives output of x=2 and y=4

**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:** There are 3 blocks in the above set of code

Block 1:   
spam = 0  
if spam == 10:  
print('eggs')

Block 2:  
if spam > 5:  
print('bacon')  
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.**

**Answer:**spam=int(input("Please enter the number"))  
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:** We need to press ‘ctrl’ + ‘c’ to come out of endless loop

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

**Answer:** The ‘break’ statement is used to come out of the loop if the condition satisfies.  
Whereas the ‘continue’ statement is used to skip the current iteration and jump to the next one.

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

**Answer:** All the 3 form representations are different but the output is same for all of them.  
All of them iterate from 0 to 9 with a step size of 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.**

**Answer:**Using for loop:  
for i in range(1, 11):  
 print(i)

Using 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?**

**Answer:** import spam  
spam.bacon()