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

**Soln:** Boolean expressions use relational and logical operators. The result of a Boolean expression is either **true** or **false**.

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

**Soln:** There are three basic Boolean search commands: **AND, OR and 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 ).**

**Soln:** 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) or (3 == 5))**

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

**(not False) or (not True)**

**Soln:**

False

False

True

False

False

True

**5. What are the six comparison operators?**

**Soln:**

== , != , < , > , <= , >=

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

**Soln:**

#Example for equal to:

If (1==3):

print(‘True’)

Else:

print(‘False)

Output:

False

#assignment operator:

num=4

print(num)

Output:

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')**

**Soln:**

ham

spam

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.**

**Soln:**

spam=int(input(“Enter a 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?**

**Soln:** I will press ( Ctrl **+ c )**

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

**Soln:**

For example:

Using Break statement:

For i in range(5):

If (i==3):

break

then output will be 0, 1, 2

Here the loop exits

Where else in case of Continue the loop will skip that number

Ex:

For i in range(5)

If (i==3):

Output is 0, 1, 2, 4

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

**Soln:**

The range(10) will start from 0 upto 9, where range(0, 10) will start the loop from 0 , and range(0, 10, 1) loop increase the variable 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.**

**Soln:**

**#Using For Loop**

For i in range(1,11):

print(i)

**#Using 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?**

**Soln:**

Spam.bacon()