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

**Ans: True and False**

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

**Ans: The logical operators ‘and’, ‘or’ and ‘not’ are also referred to as boolean operators. While ‘and’ as well as ‘or’ operator needs two operands, which may evaluate to true or false, ‘not’ operator needs one operand evaluating to true or false.**

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:**

**True and True=True**

**True and False=False**

**False and True=False**

**False and False=False**

**True or True=True**

**True or False=True**

**False or True= True**

**False or False=False**

**not False=True**

**not True=False**

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?

**Ans:-**

**==, !=, >, <, >= and <=.**

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 operator uses ‘==’ for evaluating Boolean while assignment operator uses ‘=’.**

**Ex: a==b. This is checking if variable is equal to b.**

**a=b. This is assignment.**

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: First block: ’if spam == 10:’.**

**Second bloc: ‘if spam > 5:’**

**Third block: ‘else:’**

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.

**def spam(spam):**

**"""**

**spam is a function which takes no of spam as input.**

**"""**

**try:**

**if spam==1:**

**print('Hello')**

**elif spam==2:**

**print('Howdy')**

**else:**

**print('Greetings!')**

**except Exception as e:**

**print('There is an error. {}.'.format(e))**

9.If your programme is stuck in an endless loop, what keys you’ll press?

**Ans:- We can press CTRL+C for Keyboard Interrupt.**

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

**Ans:- ‘break’ statement makes the execution go out of the loop.**

**In ‘continue’ statement, any code that follows the continue statement is not executed. a continue statement does not completely halt a loop. You can use a continue statement in Python to skip over part of a loop when a condition is met. Then, the rest of a loop will continue running.**

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

**Ans: Functionality-wise, all three are same.**

**Although, range(10) tells the range to be up to 10(excluding 10)and by-default it starts from 0 and with a step of 1.**

**In range(0,10), it knows the starting and ending point and take step as 1, by-default.**

**In range(0,10,1), it knows the starting point, ending point as well as the step.**

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:**

1. **For loop**

**for i in range(1,11):**

**print(i)**

1. **While loop**

**i=1**

**while i<11:**

**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?

**Ans:**

**Import spam as sp**

**sp.bacon()**