**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 = 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 ).**

**1=true**

**0=false**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **a** | **b** |  | **AND** | **OR** | **NOR** | **NANAD** | **XOR** |
| **1** | **1** |  | **1** | **1** | **0** | **0** | **0** |
| **1** | **0** |  | **0** | **1** | **0** | **1** | **1** |
| **0** | **1** |  | **0** | **1** | **0** | **1** | **1** |
| **0** | **0** |  | **0** | **0** | **1** | **1** | **0** |

**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 =**

|  |  |  |
| --- | --- | --- |
| **==** | **If A and B equal then true** | **A==B** |
| **!=** | **If A and B are not equal then true** | **A!=B** |
| **>** | **If A is greater than B return TRUE** | **A>B** |
| **<** | **If A is less then B return TRUE** | **A<B** |
| **>=** | **If A greater or equal to B return TRUE** | **A>=B** |

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

**Ans= The = is used when we assign a value to the variable**

**Example = a=10**

**print(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')**

**Ans = 1st BLOCK**

**if spam == 10:**

**print('eggs')**

**2nd BLOCK**

**if spam > 5:**

**print('bacon')**

**3rd BLOCK**

**else:**

**print('ham')**

**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.**

**Ans =** spam=[1,2]

for i in spam:

    if i==1:

        print('hello')

    if i==2:

        print('howdy')

    else:

        print('Greeting!')

output hello

howdy

spam=[3]

for i in spam:

    if i==1:

        print('hello')

    elif i==2:

        print('howdy')

    else:

        print('Greeting!')

output Greeting

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

**Ans = we have to pass the condition where the condition becomes false and stop execution.**

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

**Ans = Break = it stops the execution of the program if the Beak statement becomes TRUE**

**Continue = it SKIP the part of the code and continue with the next step when the condition statement becomes TRUE**

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

**Ans= range(10) = print 0 to 9**

**range(0,10) = print 0 to 9**

**range(0,10,1)= print 0 to 9**

**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 i in range(1,11):

    print(i)

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?**

**Ans = Syntax from module\_name import function\_name**

**from spam import bacon**

**bacon(2,5) //if bacon is addition of 2 number**