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

*Ans: Boolean datatype represents one of the two vales that is Ture or False.*

*Syntax =bool(x)*

*Eg : x= 5*

*Y=4*

*Print(bool(x==y)*

*Output: False*

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

*Ans: Boolean operators are*

*\*AND: “Ture”, if both the conditions are “Ture”*

*\*OR: “Ture”, if either one of the condition is “Ture”*

*\*NOT: “Ture”, if both the conditions are “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 evaluates).

*= BOOLEAN OR , AND Operator*

|  |  |  |  |
| --- | --- | --- | --- |
| *A* | *B* | *A OR B* | *A AND B* |
| *TRUE* | *TRUE* | *TRUE* | *TRUE* |
| *TRUE* | *FALSE* | *TRUE* | *FALSE* |
| *FALSE* | *TRUE* | *TRUE* | *FALSE* |
| *FALSE* | *FALSE* | *FALSE* | *FALSE* |

*= BOOLEAN NOT Operator*

|  |  |
| --- | --- |
| *A* | *NOT A* |
| *TRUE* | *FALSE* |
| *FALSE* | *TRUE* |

4. What are the values of the following expressions?

*Ans: 1) (5 > 4) and (3 == 5) = False*

*2) Not (5 > 4) = False*

*3) (5 > 4) or (3 == 5) = Ture*

*4) Not ((5 > 4) or (3 == 5)) = False*

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

*6) (not False) or (not True) = Ture*

5. What are the six comparison operators?

*ANS:*

|  |  |  |
| --- | --- | --- |
| *OPERATOR* | *DESCRIPTION* | *SYNTAX* |
| *>* | *Greater than* | *x>y* |
| *<* | *Less than* | *x<y* |
| *==* | *Equals to* | *x==y* |
| *!=* | *Not equal to* | *x!=y* |
| *>=* | *Greater than or equal to* | *x >= y* |
| *<=* | *Lesser than or equal to* | *x <=y* |

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

*Ans = 1) Assignment operator= if we use single equal mark in a expression or statement than that mean we are assigning value to a variable*

*Ex : x= 5 were x is a variable and 5 is a value and equal mark is used to assign the value to variable*

*2) Equal to = if we use double equal to mark in a expression that mean we are comparing the two values are same or not*

*Ex = x=4 and y=5 , if we need to check the values are same we use equal to operator that is x==y , where in this x is not equal to y*

7. Identify the three blocks in this code:

*Ans spam = 0*

*if spam == 10: ……………………1st block*

*print('eggs')*

*if spam > 5:……………………………..2nd block*

*print('bacon')*

*else:…………………………………………..3rd block*

*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=18*

*If spam ==1:*

*Print(‘HELLO’)*

*Elif spam==2:*

*Print(‘howdy’)*

*Else:*

*Print(‘greeting’)*

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

*Ans= if a programme is stuck in an endless loop then we need to press ctrl + c , this will rise keyboardinterruput error*

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

*Ans= Break statements immediately cuts down* the loop when it is encountered , whereas continue skips the code after it for that iteration of loop

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

*Ans= syntax of range() function :*

*range(lower\_limit, upper\_limit , step\_size)*

* *Lower limit , It is the starting position of the sequence. The default value is 0 if not specified.*
* *Upper limit, generate numbers up to this number, i.e., An integer number specifying at which position to stop (upper limit). The range() never includes the stop number in its result*
* *Step size, Specify the increment value. Each next number in the sequence is generated by adding the step value to a preceding number. The default value is 1 if not specified. It is nothing but a difference between each number in the result*

*For example:*

1. *range(10): here start (lower limit )is pre defined that is 0 and a upper limit 10 and step size which is also pre defined that is 1*
2. *range(0,10): here the lower limit and upper limit is provide that is 0 and 10 respectively. And a pre defined step size 1*
3. *range (0,10,1): in this all three are provided the lower limit, upper limit and step size*

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

*print(i)*

*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?

*Ans= import spam*

*spam.bacon()*