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

Ans:- The *boolean* data type is either True or False. In Python, boolean variables are defined by the True and False keywords.

a=true

type(a)

<class 'bool'>

b= false

type(b)

<class 'bool'>

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

Ans:- the three boolean opreator are = 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 ).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **condition 1 ( X)** | **condition 2 (Y)** | **NOT X ( ~ X )** | **X AND Y ( X && Y )** | **X OR Y ( X || Y )** |
| false | false | true | false | false |
| false | true | true | false | true |
| true | false | false | false | true |
| true | true | false | true | 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)

Ans:- (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:-1. Python Less Than (<) Operator

2. Python Greater Than (>) Operator

3. Less Than or Equal To (<=) Operator

4. Equal To or Greater Than – Python (>=) Operator

5. Python Equal To (==) Operator

6. Python Not Equal Operator (!=) Operator

Q6. How do you tell the difference between the equal to and assignment operators?Describe a condition and when you would use one.

Ans:- equal (=) is an Assignment Operator in programming languages, It is Binary Operator which operates on two operands.

= assigns the value of right side expression’s or variable’s value to the left side variable.

x=(a+b)

y=x

Here, When first expression evaluates value of (a+b) will be assigned into x and in second expression y=x; value of variable x will be assigned into y.

== is an Equal To Operator, It is Binary Operator which operates on two operands.

== compares value of left and side expressions, return 1 if they are equal other will it will return 0.

x=10

y=10

if(x==y)

printf("True")

else

printf("False")

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:- According to this code there is an indentation problem present if assume that indentation is correct than ouput is

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.

Ans:-

spam= int(input("enter value"))

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:- An infinite loop occurs when a program keeps executing within one loop, never leaving it. To exit out of infinite loops on the command line, press CTRL + C

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

Ans:- Break statements exist in Python to exit or “break” a for or while conditional loop. When the loop ends, the code picks up from and executes the next line immediately following the loop that was broken.

The continue statement is used to skip code within a loop for certain iterations of the loop. After the code is skipped, the loop continues where it left off.

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

Ans:-range(10) =In this it will take only one argument. range(stop)

range(0,10)=In this it will take two argument.range(start,stop)

range(0,10,1)= In this it will take three argument.range(start,stop,argument)

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:-USING FOR LOOP

for i in range(1,10):

print(i)

USING WHILE LOOP

i=0

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:-

Module spam in spam.py:

def bacon():

print('hello')

import spam

spam.bacon()

#this will print hello