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

Ans.:- Python Boolean type is one of the built-in data types provided by Python, which represents one of the two values i.e. True or False. Generally, it is used to represent the truth values of the expressions. For example, 1==1 is True whereas 2<1 is False.

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

Ans:- The most popular Boolean commands are 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).

Ans:-

**The truth tables**

Truth tables show the result of combining any two expression boolean expressions using the AND operator and the OR operator (or the NOT operator).

**You should memorize/learn these values and be able to duplicate this table:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **condition 1 (e.g., X)** | **condition 2 (e.g., 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) :- **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:- A comparison operator compares two values and returns a boolean value, either True or False . Python has six comparison operators: less than ( < ), less than or equal to ( <= ), greater than ( > ), greater than or equal to ( >= ), equal to ( == ), and not equal to ( != ).

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 the so-called assignment operator and is used to assign the result of the expression on the right side of the operator to the variable on the left side. The '==' is the so-called equality comparison operator and is used to check whether the two expressions on both sides are equal or not. You can consider no. 8 question as a example .Where take value from use and save it to spam variable via assignment operator and in this program i checked condition with equality comparison operator.

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:- Without indentation it is difficult to understand but i guess:-

spam = 0

if spam == 10:

print('eggs') # indent increased, block A

if spam > 5: # still block A

print('bacon') # still block A, indent increased, block B inside block A

else: # still block A, indent decreased, block B ended in line above

print('ham') # still block A, indent increased, block C inside block A

print('spam') # still block A, indent decreased, block C ended in line above

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=int(input())

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?

Ans:- An infinite loop is a loop that runs indefinitely and it only stops with external intervention or when a break statement is found. You can stop an infinite loop with CTRL + C

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

Ans:- Break statement stops the entire process of the loop. Continue statement only stops the current iteration of the loop. Break also terminates the remaining iterations. Continue doesn't terminate the next iterations; it resumes with the successive iterations.

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

Ans:- No Difference. All are same

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)

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:- from spam import bacon