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

Ans:

Two values of the Boolean data type are True and False. First letters of True and False should be in capital.

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

Ans:

They 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 ).

Ans:

Truth Table for ‘and’ boolean operator:

|  |  |  |
| --- | --- | --- |
| A | B | A and B |
| True | True | True |
| True | False | False |
| False | False | False |
| False | True | False |

Truth Table for ‘or’ boolean operator:

|  |  |  |
| --- | --- | --- |
| A | B | A or B |
| True | True | True |
| True | False | True |
| False | False | False |
| False | True | True |

Truth Table for ‘not’ boolean operator:

|  |  |
| --- | --- |
| A | not A |
| True | False |
| False | True |

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:

They are:

1. Less than (<)

2. Less than or equal to (<=)

3. Greater than (>)

4. Greater than or equal to (>=)

5. Equal to ( == )

6. 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 equal to operator (==) checks whether the two given operands are equal or not where as assignment operator (=) is used for assigning the value to a variable.

Example:

>>> 10+5 == 15 # returns True

>>> 5>10 #returns False

>>> a = 15 #assigns 15 to variable a

>>> name = ‘John Doe’ #assigns ‘John Doe’ to variable name

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:

Block 1: spam = 0

if spam == 10:

Block 2: print(‘eggs’)

Block 2: if spam > 5:

Block 3: print('bacon')

Block 2: else:

Block 3: print(‘ham’)

Block 2: print(‘spam’)

Block 1: 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:

def func(spam):  
 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: Ctrl + C

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

Ans:

The break statement terminates the whole iteration of a loop and control is passed to code after loop.

The continue statement skips the code that comes after it, and the control is passed back to the start for the next iteration.

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

Ans:

range(10), range(0, 10), and range(0, 10, 1) all produces same output that is integers from 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:

1. Using for loop:

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

1. Using 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:

spam.bacon()