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

ANS- true and false (Boolean literals). Boolean expressions use relational and logical operators.

# Declaring variables

a = 10

b = 20

# Comparing variables

print(a == b)

# output

False.

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

ANS-the use of Boolean operators which include 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-

| A | B | A or B |  | A | B | A and B |  | A | Not A |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| True | True | True |  | True | True | True |  | True | False |
| True | False | True |  | True | False | False |  | False | True |
| False | True | True |  | False | True | False |  |
| False | False | False |  | False | False | False |  |

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- Operator Name

== equal to

!= not equal to

< less than

<= less than or equal to

> greater than

>= greater than or 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 difference between = (Assignment) and == (Equal to) operators is an assignment operator is used to assign the value on the right to the variable on the left. The '==' operator checks whether the two given operands are equal or not.

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-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 =0

if spam == 1:

print('Hello')

if 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-

|  |  |  |
| --- | --- | --- |
| **Basis for comparison** | **break** | **continue** |
| Task | It eliminates the execution of remaining iteration of loop | It will terminate only the current iteration of loop. |
| Control after break/continue | ‘break’ will resume control of program to the end of loop enclosing that ‘break’. | The ‘continue’ will resume the control of the program to next iteration of that loop enclosing ‘continue' |
| causes | It early terminates the loop. | It causes the early execution of the next iteration. |
| continuation | The ‘break ‘stop the continuation of the loop. | The ‘continue’ does not stop the continuation of loop and it stops the current. |
| Other | It used with the ‘switch’, ‘label’ | Cannot be executed with switch and the labels. |

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

ANS-range(stop) takes one argument.

range(start, stop) takes two arguments.

range(start, stop, step) takes three arguments.

range(stop)

OUTPUT:

0 1 2 3 4 5 6 7 8 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. for i in range(1, 11):

print(i)

2. 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- def bacon():

A=10

B=20

spam.bacon().