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

A. True and False

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

A. 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).

A.

Truth Table for and (Logical Conjunction):

|  |  |  |
| --- | --- | --- |
| Operand 1 | Operand 2 | Result |
| TRUE | TRUE | TRUE |
| TRUE | FALSE | FALSE |
| FALSE | TRUE | FALSE |

Truth Table for or (Logical Disjunction):

|  |  |  |
| --- | --- | --- |
| Operand 1 | Operand 2 | Result |
| TRUE | True | True |
| TRUE | False | True |
| FALSE | True | True |
| FALSE | False | False |

Truth Table for not (Logical Negation):

|  |  |
| --- | --- |
| Operand | Result |
| TRUE | False |
| FALSE | 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)

A.

(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?

A.Six comparision operator are

1. ==

2. !=

3. >

4. <

5. >=

6. <=

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

A. A single equal to operator(=) is used for assignment. for example x=1 on the other hand a double equal to operator is used for comparision(==)

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')

A. In the above code there are two sections with one condition. the condition checks whether the spam is equal to 10 or not and if the the condition is true the first block is executed and 'eggs' is printed and if the condition is false then it jumps to the next if condition. if spam is greater than 5 then it prints 'bacon' and if not then it prints below output

o/p: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.

A.

spam = 1

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?

A. ctrl +c or ctrl+break

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

A. Break ends the loop and continue skips the current iteration.

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

A.

a. range(10) starts from 0 and ends at 9. Here 0 is default starting range

b. range(0,10) starts from 0 and ends at 9. Here 0 is given starting range

c. range(0,10,1) starts from 0 and ends at 9 with step 1. Here step is the difference between each element in the loop.

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.

A. for i in range(1,11):

print(i)

13. If you had a function named bacon() inside a module named spam, how would you call it after importing spam?

A. import spam

spam.bacon()