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

ANS: TRUE = 1 , FALSE = 0

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

ANS: 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: AND:

|  |  |  |  |
| --- | --- | --- | --- |
| INPUT | INPUT |  | OUTPUT |
| 0 | 0 | = | 0 |
| 0 | 1 | = | 0 |
| 1 | 0 | = | 1 |
| 1 | 1 | = | 1 |

OR:

|  |  |  |  |
| --- | --- | --- | --- |
| INPUT | INPUT |  | OUTPUT |
| 0 | 0 | = | 0 |
| 0 | 1 | = | 1 |
| 1 | 0 | = | 1 |
| 1 | 1 | = | 1 |

NOT:

|  |  |
| --- | --- |
| INPUT | OUTPUT |
| 0 | 1 |
| 1 | 0 |

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:

= = (equals)

!= (Not equals)

< (smaller than)

> (greater than)

>= (greater than or equals)

<= (smaller than or equals)

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

ANS:

= = (equals) -🡪 It states that equals to

= (assignment) -🡪 It states that assignment

7. Identify the three blocks in this code:

spam = 0

if spam == 10: # 1st block because of improper indentation

print('eggs')

if spam > 5:

print('bacon') # 2nd block because of improper indentation

else:

print('ham') # 3rd  block because of improper indentation

print('spam')

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:

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: Restart kernel or CTRL + C

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

ANS:

Break: Terminates the programme

Continue: Here, control goes back to loop. (ex: while, for)

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

ANS: in for loop, all are same

range (10) : here starting point is 0 by default & end point is 10 , and jump is 1 by default

range (0, 10): here starting point is 0 & end point is 10 as it is mentioned , and jump is 1 by default

range (0, 10, 1): here starting point is 0 , end point is 10 , and jump is 1 as mentioned

Since, 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:

Using for loop:

for i in range(1, 11):

  print(i , end= " ")

Using while loop:

i = 1

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: spam. Bacon()