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

Ans: Boolean data type values are True or False. The first character of values are capital letter otherwise it will raise NameError. For bool() 0 acts as False and other than that all are True.

Ex:

1) 3)

b = True b = ("False")

print(type(b)) Print(b)

<class 'bool'> True

2)

B = bool(0)

Print(B)

False

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

Ans:

The different types of Boolean operators 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:

1)

list\_AND = [True and True, True and False, False and True, False and False]

print(list\_AND)

[True, False, False, False]

2)

list\_OR = [True or True, True or False, False or True, False or False]

print(list\_OR)

[True, True, True, False]

3)

list\_NOT = [not True, not False]

print(list\_NOT)

[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)

Ans:

1. (5 > 4) and (3 == 5) = False

2. not (5 > 4) = False

3. (5 > 4) or (3 == 5) = True

4. not ((5 > 4) or (3 == 5)) = False

5. (True and True) and (True == False) = False

6. (not False) or (not True) = True

5. What are the six comparison operators?

Ans:

1. == : is equal to
2. != : is not equal to
3. > : is greater than
4. >= : is greater than or equal to
5. < : is less than
6. <= : is less 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:

‘= ‘single equals to sign are used for the assignment operation. ‘== ' double equals to sign is used for the equal to condition check. When we want to assign something (eg. a = 10) we use the assignment operator. whereas when we want to check some condition (eg. 10 == 100) we use the equal to condition check operator.

Ex:

1)a=10 2)10==100 3) 'ok' =='ok'

Print(a) False True

10

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:

1. spam == 10 is gives False. Then first if condition failed.
2. spam>5 is gives False. Then second if condition failed.
3. The if conditions are failed for that else part executed.

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("Enter Spam value"))

if spam == 1:

print("Hello")

elif spam ==2:

print("Howdy")

else:

print("Greetings! ")

output:

1) q 2) 3)

Enter Spam value1 Enter Spam value2 Enter Spam value10

Hello Howdy Greetings!

9.If your programme is stuck in an endless loop, what keys you’ll press?

Ans:

1. Press Ctrl + C on the command line.
2. Restart the kernel

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

Ans:

1. Break: It is used to break the loop and exit from the loop
2. continue: It is used to skip the current iteration of the loop and continue with the next iteration.

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

Ans:

There is no difference

1) 2)

for i in range(10): for i in range(0, 10):

print(i, end = ' ') print(i, end = ' ')

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9

3)

for i in range(0, 10, 1):

print(i, end = ' ')

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.

1) 2)

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

print(i, end = ' ') while i < 11:

print(i, end = ' ')

i += 1

1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 10

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

Ans:

import spam  
spam.bacon()