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

True with capital T is equal to 1

False with capital F is equal to 0

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

and return True if both sides are True

or return True if both sides are True and if one of two side is True

not reverse the value of True/False

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 ).

AND Truth Table

x and y Returns

True and True True

True and False False

False and True False

False and False False

OR Truth Table

x or y Returns

True or True True

True or False True

False or True True

False or False False

NOT Truth Table

not x Returns

not True False

not False True

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?

== Equal to

!= Not equal to

< Less than

> Greater than

<= Less than or equal to

>= 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.

= ==

It is an assignment operator. It is a relational or comparison operator.

It is used for assigning the value to a variable. It is used for comparing two values. It returns 1 if both the values are equal otherwise returns 0.

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')

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

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.

spam = [i for i in range(1,6)]

for num in spam:

if num == 1:

print("Hello")

elif num == 2:

print("Howdy")

else:

print("Greetings!")

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

ctrl + c

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

break will stop/exit the loop completely and executes the statements after the loop.

continue leaves the current iteration and executes with the next value in the loop

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

three of them are the same. the range() function returns a sequence of numbers, starting from 0 by default, and increments by 1 (by default), and stops before a specified number. so all of them will iterate 10 times. e.g:

a = [a for a in range(10)]

b = [b for b in range(0, 10)]

c = [c for c in range(0, 10, 1)]

print(a, b, c, sep="\n")

the output

[0, 1, 2, 3, 4, 5, 6, 7, 8, 9]

[0, 1, 2, 3, 4, 5, 6, 7, 8, 9]

[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.

for i in range(10):

print(i+1)

x = 0

while x < 10:

x +=1

print(x)

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

a.

from spam import bacon

bacon()

b.

import spam

spam.beacon()