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

Ans: The two values of the Boolean data type are true and false. They are written as follows:

• true

• false

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

Ans: There are three main types of Boolean operators:

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: The truth tables for the three main Boolean operators:

AND:

P Q P AND Q

True True True

True False False

False True False

False False False

OR:

P Q P OR Q

True True True

True False True

False True True

False False False

NOT

P NOT P

True False

False True

4. What are the values of the following expressions?

Ans:

(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: Python has six comparison operators:

i) Less than (<)

ii)Less than or equal to (<=)

iii)Greater than (>)

iv)Greater than or equal to (>=)

v)Equal to (==)

vi)Not 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 equal to operator == is used to compare the values of two operands and return a Boolean value. The Boolean value can be either True or False. For example, the following expression will return True: 1 == 2

The assignment operator = is used to assign a value to a variable. For example, the following expression will assign the value of 1 to the variable x: x = 1

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: in this code in if statement is not using indentation and else part also if we use indentation the output of this code is :

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 = int(input("Enter a number: "))

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 : Ctrl+C. This will interrupt the program and bring you back to the Python interpreter.

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

Ans:

Statement Description

break Terminates the current loop and resumes execution at the next statement.

continue Skips the rest of the current iteration of the loop and goes straight to the next . iteration.

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

Ans:

the difference between range(10), range(0, 10), and range(0, 10, 1) is the value of start and step.

range(10) :will generate a sequence of numbers from 0 to 9.

range(0, 10) :will generate a sequence of numbers from 0 to 9, but the first number will be 0.

range(0, 10, 1) :will generate a sequence of numbers from 0 to 9, but the numbers will be incremented by 1.

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)

using while loop:

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: spam.bacon()