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

True-1 False-0

2. What are the three different 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 ).

AND- operator: If both inputs are True(1)then only output is True(1) else False(0)

|  |  |  |
| --- | --- | --- |
| Inputs | | Output |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

OR- operator: If any one input is True(1)then output isTrue(1) else False(0)

|  |  |  |
| --- | --- | --- |
| Inputs | | Output |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |

Not- operator: Logical negation (IF input is True(1) output is False(0) and viceversa)

|  |  |
| --- | --- |
| Inputs | 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?

< Less than

<= Less than or equal to

> Greater than

>= Greater than or equal to

== equal to

!= 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.

= is a assignment operator used to assign value to a variable.

Eg: K=5 here value 5 is assigned to variable K.

== is a comparison operator to compare value on left and right of == and return Boolean result.

Eg: X=15

Y=15

X==Y here the X value is compared with Y and both content is correct so it return True

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

Block-1

print('eggs')

if spam > 5:

Block-2

print('bacon')

else:

print('ham')

Block-3

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=int(input("Enter spam value:"))

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?

CTRL+C

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

The **break** statement terminates the current loop and resumes execution at the next statement.

for character in 'PYTHON':

if character=='T':

break

print('current letter:', character)

The **continue** statement returns the control to the beginning of the loop and rejects all the remaining statements in the current iteration of the loop and moves the control back to the beginning of loop.

for character in 'PYTHON':

if character=='T':

continue

print('current letter:',character)

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

range(10)==> iteration starts from 0 to 9

range(0,10)==> iteration from 0 to 9

(0, 10, 1)?==> iteration from 0 to 9 in step of 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.

Program:

*Using for loop*

for i in range(1,11):

print(i)

*Using for 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?

Import spam

spam.bacon()