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

ANS – True and False. Always write it as first letter capital.

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

ANS – 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 – AND truth table :

|  |  |  |
| --- | --- | --- |
| A | B | AND |
| 1 | 1 | True |
| 1 | 0 | False |
| 0 | 1 | False |
| 0 | 0 | False |

OR table :

|  |  |  |
| --- | --- | --- |
| A | B | OR |
| 1 | 1 | True |
| 1 | 0 | True |
| 0 | 1 | True |
| 0 | 0 | False |

NOT table :

|  |  |
| --- | --- |
| A | AND |
| 1 | False |
| 0 | 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?

ANS –

=, !=, >, >=, <, <=

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

ANS – Equal to (==) is used to show whether two expressions gives the same values which are on left and right side. Assignment (=) is used to assign value to a variable. a = 10, here ‘=’ is used to assign a value of 10 to variable ‘a’. type(a) == int, here == is used to show that type of variable ‘a’ is integer.

7. Identify the three blocks in this code:

ANS – 3 Indentation blocks corrected below,

spam = 0

if spam == 10:

print('eggs') --🡪 Indent block 1

if spam > 5:

print('bacon')-🡪Indent block 2

else:

print('ham')-🡪Indent 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.

ANS –

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

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 - Break

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

ANS – Break will exit the loop, Continue will skip that iteration and hand over the command to main loop function and will continue the further iterations.

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

ANS – There no difference between range(10), range(0, 10), and range(0, 10, 1). All three defines same range function.

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 –

For loop program,

for i in range (1, 11) :

print(i)

While loop program,

n = 1

while n <= 10:

print(n)

n += 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()