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

**Ans** – two values of Boolean data types are **True and False**

They can be written as True and False (first letter should be capital)

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

**Ans** – three different types of Boolean operators are

1. and – using and operator we check if both conditions are true or not
2. or – using or operator we check either one condition is true or not
3. not(!) – using not operator we reverse the condition

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** - truth table are –

1. and

|  |  |  |
| --- | --- | --- |
| a | b | a and b |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

1. or

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| a | b | a or b |  |  |  |
| True | True | True |  |  |  |
| True | False | True |  |  |  |
| False | True | True |  |  |  |
| False | False | False |  |  |  |

1. not(i)

|  |  |
| --- | --- |
| a | not(a) |
| 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** – Six comparison operators are

1. == used to check right side is equal to left side or not
2. != used to check right side is unequal to left side or not
3. >= used to check right side greater than left side or not
4. <= used to check right side less than left side or not
5. > used to check right is greater than left side or not
6. < used to check right is less than left side or not

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

Ans – 1) equal : it is used to check the equality in looping or conditional if else

Example –

Test = 10

If test == 10 :

print(“right”)

2) assignment operator – it is used to assign a value to a variable

Example –

Test = 20

7. Identify the three blocks in this code:

**Ans -**

spam = 0

if spam == 10:

print('eggs')

1. first block if the spam value is equal to 10 then it is going to execute

if spam > 5:

print('bacon')

1. second block if spam is greater than 5 then it is going to execute.

else:

print('ham')

print('spam')

print('spam')

1. and if spam is not greater then 5 then else block is going to execute.

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=0

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-** to get out of endless loop we have to press **clt+c .**

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

**Ans- break**: break command is used to terminate entire loop at once.

**Continue**: it is use to skip the instruction below the continue loop and go for the next iteration.

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

**Ans -** range(10): in this expression only end value is given.

range (0,10): in this expression starting and end value both are given.

range (0,10,1): in this expression starting end and also the step is also given.

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 – program to print 1 to 10 using for loop**

For i in range(1,11):

print(i)

**program to print 1 to 10 using while loop**

a=1

while a<11:

print(a)

a=a+1

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

**Ans -**  to import a function bacon() inside spam module

Import spam

**spam.bacon()**