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

Answer 1: There are two values of Boolean data type - 1. True and 2. False

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

Answer 2: There are three types of boolean operators:

1. AND

2. OR

3. 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 ).**

Answer -3

|  |  |  |
| --- | --- | --- |
| **Truth Table - AND** | | |
| **A** | **B** | **Result** |
| TRUE | TRUE | TRUE |
| FALSE | TRUE | FALSE |
| TRUE | FALSE | FALSE |
| FALSE | FALSE | FALSE |

|  |  |  |
| --- | --- | --- |
| **Truth Table - OR** | | |
| **A** | **B** | **Result** |
| TRUE | TRUE | TRUE |
| FALSE | TRUE | TRUE |
| TRUE | FALSE | TRUE |
| FALSE | FALSE | FALSE |

|  |  |
| --- | --- |
| **Truth Table - NOT** | |
| **A** | **Result** |
| TRUE | FALSE |
| FALSE | TRUE |

**4. What are the values of the following expressions?**

**(5 > 4) and (3 == 5)**

**not (5 > 4)**

**(5 > 4) or (3 == 5)**

**not ((5 > 4) or (3 == 5))**

**(True and True) and (True == False)**

**(not False) or (not True)**

Answer 4:

|  |  |
| --- | --- |
| **Expression** | **Output** |
| **(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?**

Answer 5:

|  |
| --- |
| **Six comparison operators** |
| greater than (>) |
| less than (<) |
| equal to (==) |
| not equal to (!=) |
| 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.**

Answer 6: The equal to operator compare two values and provide the True or False Boolean value as an output. On the other hand, the assignment operator assign a value to a variable

*Code:-*

a=10

if a==10:

print("number is equal to 10 ")

*Output:-* number is equal to 10

In above example, first we have assigned an integer value of 10 to variable ‘a’ and then it is compared with value 10 in if statement.

**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')**

Answer 7:

1st block:-

if spam == 10:

print('eggs')

2nd block:-

if spam > 5:

print('bacon')

3rd block:-

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.**

Answer 8:

spam=int(input("enter the 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?**

Answer 9:- Interrupt key

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

Answer 10:-Whenever program encounters break statement it comes out of the loop skipping the remaining iteration.

Whenever program encounters continue statement it directly jumps back to next iteration skipping the remaining lines of codes in a loop. Continue statement is opposite of break statement.

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

Answer 11:- They all are same.

**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.**

Answer 12:-

Using for loop:-

for i in range(1,12):

print(i,end=" ")

Using while loop:-

i=1

while i<12:

print(i,end=" ")

i+=1

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

Answer 13:- from spam import bacon