**Assignment 2 Solution**

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

**Answer => There are two values of Boolean data type.**

1. **True**
2. **False**

**For example :- True or True = True**

**Here True is Boolean data type and or is logical operator. True mean 1 and False mean 0.**

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

**Answer :- There are three basic Boolean operators as follow:**

1. **AND**
2. **OR**
3. **NOT**

**These operator return only Boolean value either True or False**

Q.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 :- 1. AND Operator Truth Table as follow:**

**True AND True = True**

**True AND False = False**

**False AND True = False**

**False AND False = False**

**OR Operator Truth Table as Follow:**

**True OR True = True**

**True OR False = True**

**False OR True = True**

**False OR False = False**

**NOT Operator Truth Table as Follow:**

**NOT True = False**

**NOT False = True**

Q.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 :-**

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

**True and False = False**

**Not (5>4)**

**Not True = False**

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

**True or False = True**

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

**Not (True) = False**

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

**True and False = False**

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

**True or False = True**

Q.5 => What are the six comparison operators?

Answer :-

**A Comparison Operator compare two value and return Boolean value either True or False.**

**There are six comparison operators are as follow:**

1. **> (Greater Than)**
2. **< (less Than)**
3. **>= (Greater Than or equal to)**
4. **<= (less Than or equal to)**
5. **== (Equal to)**
6. **!= (Not Equal to**)

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

**Answer :-**

**The “=” assignment operator is used to assign the value on the right to the variable on the left.**

**For Example :-**

**a = 10**

**b = 20**

**equal to is used to check whether the given two operands are equal or not. If both are same than it return True otherwise false.**

**For Example:-**

**5 == 5**

**This will return True.**

**When we want to check the value are equal or not then we use equal to operator.**

**If we want to assign some value to variable than we use assignment operator.**

Q.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 :-**

**spam = 0**

**if spam == 10:**

**print('eggs')**

**if spam > 5:**

**print('bacon')**

**else:**

**print('ham')**

**print('spam')**

**print('spam')**

Q.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 :- spam = input("Enter the value ")**

**if spam == "1":**

**print("Hello")**

**elif spam == "2":**

**print("Howdy")**

**else:**

**print("Greeting!")**

Q.9 => If your programme is stuck in an endless loop, what keys you’ll press?

**Answer :- CTRL + C**

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

Answer :-

**Break :- Break statement is used to terminate the current loop and passes the control to next loop or main body.**

**For example :- i = 0**

**for i in range(10):**

**if i == 5:**

**break**

**print(i)**

**This above program return 0,1,2,3,4**

**Continue :- Continue statement is used to skip current iteration and execute the next iteration in loop.**

**For example:- i = 0**

**for i in range(10):**

**if i == 5:**

**continue**

**print(i)**

**This above program return 0,1,2,3,4,6,7,8,9**

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

**Answer :-**

**In for loop all three range function return the same output that is 0 to 9.**

Q.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 :-**

**Using for loop :-**

**for i in range(1,11):**

**print(i)**

**Using While loop :-**

**i = 1**

**while i<=10:**

**print(i)**

**i = i+1**

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

**Answer :-**

**Spam.bacon()**