**Assignment\_2**

**Q1.** What are the two values of the Boolean data type? How do you write them?

**Ans:**

True and False and notation is True and False ( upper case T and F followed by lower case letter)

**Q2.** What are the three different types of Boolean operators?

**Ans:**

and , or , not

**Q3.** 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:**

True **and** True => True.  
  
True **and** False =>False.  
  
False **and** True =>False.  
  
False **and** False =>False.  
  
True **or** True =>True.  
  
True **or** False =>True.  
  
False **or** True =>True.  
  
False **or** False =>False.  
  
**not** True =>False.  
  
**not** False =>True.

**Q4.** 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)

**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

**Q5.** What are the six comparison operators?

**Ans:**

==, !=, <, >, <=, and >=.

**Q6.** How do you tell the difference between the equal to and assignment operators? Describe a condition and when you would use one.

**Ans:**

== is the equal to operator that compares two values and evaluates to a Boolean, while = is the assignment operator that stores a value in a variable.

**Q7.** 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')

**Ans**:

The three blocks are everything inside the if statement and the lines print('bacon') and print('ham').  
  
print('eggs')  
if spam > 5:  
print('bacon')  
else:  
print('ham')  
print('spam')

**Q8.** 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:**

if spam == 1:

print('Hello')

elif spam == 2:

print('Howdy')

else:

print('Greetings!')

**Q9.** If your programme is stuck in an endless loop, what keys you’ll press?

**Ans:**

 CTRL + C

**Q10.** How can you tell the difference between break and continue?

**Ans:**

The break statement will move the execution outside and just after a loop. The continue statement will move the execution to the start of the loop.

**Q11.** In a for loop, what is the difference between range(10), range(0, 10), and range(0, 10, 1)?

**Ans:**

They all do the same thing. The range(10) call ranges from 0 up to (but not including) 10, range(0, 10) explicitly tells the loop to start at 0, and range(0, 10, 1) explicitly tells the loop to increase the variable by 1 on each iteration.

**Q12.** 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:**

1)

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

2)  
i = 1  
while i <= 10:  
 print(i)  
 i = i + 1

**Q13.** if you had a function named bacon() inside a module named spam, how would you call it after importing spam?

**Ans:**

spam.bacon()