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

Sol: The only two values of the Boolean data type are False and True.

To write them, first letter is written in uppercase while rest letters are written in lowercase.

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

Sol: and, not, or are the three Boolean operators.

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 evaluates).

Sol: And:

True and False = False

True and True = True

False and True = False

False and False = False

Or:

True or False = True

True or True = True

False or True = True

False or False = False

Not:

not False = True

not True = False

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)

Sol: (5 > 4) and (3 == 5) = False

not (5 > 4) = False

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

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

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

(Not False) or (not True) = True

5. What are the six comparison operators?

Sol: Six comparison operators are: less than (<), greater than (>), equal to (=), less than or equal to (<=), greater than or equal to (>=), not 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.

Sol: Equal to: By using equal to we can compare any two variables or values. We can obtain Boolean values in the form of result of the comparison.

Assignment: By using assignment operator we can assign values to the variables.

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print(‘egg’)

if spam > 5:

print(‘bacon’)

else:

print(‘ham’)

print(‘spam’)

print(‘spam’)

Sol: Block includes the lines of code in between the ‘if’ and ‘print’ statements

1. if spam == 10:

print(‘egg’)

2. if spam > 5:

print(‘bacon’)

3. 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.

Sol:

spam = 1

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?

Sol: Keys to stop endless loop are: CRTL + C

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

Sol: Break: It is used to terminate the loop and exit it.

Continue: It is used to stop the running loop and restart the next loop again

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

Sol: Difference in given syntax is as follows:

range (10): It specifies the range must contain 10 values including 0 as the starting point.

range (0,10): In this command 0 specifies the starting point, while the 10 represents the number of values in the range.

range (0,10,1): In this command, 0 specifies the starting point, 10 specifies the end point that is excluded and 1 specifies the step size.

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.

Sol:

For loop:

for i in range(1,11):

print(i)

while loop:

i=0

while i<=10:

print(i)

i+=1

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

importing spam?

Sol: spam.bacon()