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

**True, False** are the two values supported by boolean data type

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

and ---: if both are True then it will be True

or ---: if either of two is True then it will be True

not ---: negation i.e, opposite of given value for example: not (True) is False

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 ).

**---:and operations:**

True and True = True

True and False = False

False and True = False

False and False = False

**---:or operations**

True or True = True

True or False = True

False or True = True

False or False = False

**---:not operations**

not True = False

not False = True

4. What are the values of the following expressions?

(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?

>, <, >= , <=, ==, !=

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

Assignment operator is used to store the value/information in the variable for example f\_name=’harry’ i.e, ‘harry’ a string value is assigned to f\_name variable using assignment operator ‘=’.

‘==’ equal to operator is a comparison operator that evaluates the result as either True or False of Boolean data type. For example 2 == 2 evaluated as True and 3 == 2 evaluated as False.

7. Identify the three blocks in this code:

spam = 0

----: Block-1

if spam == 10:

print('eggs')

----: Block-2

if spam > 5:

print('bacon')

----:Block-3

else:

print('ham')

print('spam')

print('spam')

The first block is “if block with print(‘eggs’)”

The second block is “if block with print(‘bacon’)

The third block is “else block with print(‘ham’)”

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.

# block-1 print Hello if spam is equal to 1

if spam == 1:

print('Hello')

# block-2 print Howdy if spam is equal to 2

elif spam == 2:

print('Howdy')

# block-3 print Greetings! otherwise

else:

print('Greetings!')

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

Ctrl + C shortcut will send the kill signal and the program will get terminated.

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

The continue statement will just skip the current iteration and it will take back the flow control i.e, execution to start of the loop.

The break statement will completely skip all the remaining iterations and will come out of the current loop and it will take back the flow control i.e, execution to the right after the end of loop in which break statement has been executed.

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

range syntax says range(start,end,increment\_by) where start is inclusive with default value of 0 and end is exclusive and increment\_by with default value of 1.

Indirectly all 3 will result in the same thing but the way it is being written is different.

range(10) ---: The loop starts at 0 and goes up to 10 (note it will go only till 9 and 10 is excluded)

range(0,10) ---: Here we passed both start value as 0 that overrides the default start value and end as 10.

The loop starts at 0 and goes up to 10 (note it will go only till 9 and 10 is excluded)

range(0,10,1) ---: Here we passed all three start value as 0 that overrides the default start value and end as 10 and increment\_by as 1 0 that overrides the default increment\_by value.

The loop starts at 0 and goes up to 10 and everytime it increases the variable by 1 (note it will go only till 9 and 10 is excluded)

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.

# prints the numbers 1 to 10 using a for loop

for i in range(0, 10):

print(i+1)

# (OR)

for j in range(1, 11):

print(j)

# prints the numbers 1 to 10 using a while loop.

k = 1

while k <= 10:

print(k)

k = k + 1

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

import spam #will be used to import spam module

**spam.bacon()** #will be used to call the bacon() function under spam module.