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

:- two values of boolean data type are True and False. We can get boolean values of evaluation of expression with bool() function

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

:- Three boolean operators are ‘and’, ‘or’ and ‘not’

eg. True and False, True or False, not True

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

| operand1 | operand2 | operand1 and operand2 |
| --- | --- | --- |
| True | True | True |
| True | False | False |
| False | False | False |
| False | True | False |

or

| operand1 | operand2 | operand1 and operand2 |
| --- | --- | --- |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

not

| operand | not operand |
| --- | --- |

True False

| 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?

:- Below are the comparison operators

| **Operator** | **Name** | **Example** |
| --- | --- | --- |
| == | Equal | x == y |
| != | Not equal | x != y |
| > | Greater than | x > y |
| < | Less than | x < y |

>= Greater than equal to x >= y

<= Less than equal to x <= y

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

:- equal to is denoted as ==

eg. x==y it is used when we want to check both variables having same value

assignment is denoted with =

eg. x=10. it is used when we want assign a value to a variable

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')

:-

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

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.

:- spam = 1

if spam == 1:

print(“Hello”)

if spam == 2:

print(“Howdy”)

else:

print(“Greetings!”)

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

:- CTRL + c

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

:- break keyword stops further execution of the iteration in a loop and also stop future iterations of the loop

whereas continue keyword stops further execution of the iteration in a loop but continues execution of future iterations of the loop until its terminal condition occurs.

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

:- in for loop all the given range expressions give same result sets but the difference is

* range(10): range (stop) takes one argument.
* range(0, 10): range (start, stop) takes two arguments.
* range(0, 10, 1): range (start, stop, step) takes three arguments.

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.

:- for i in range(1,10,1):

print(i)

i = 1

while i<=10:

print(i)

i=i+1

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

:- import spam

spam.bacon()