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

Two values are 0 and 1. A=True ,B= False

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

Three Boolean operators are- AND, OR, NOT

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 Operator- if any input is 0 then output is 0

|  |  |  |
| --- | --- | --- |
| A | B | A AND B |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

OR Operator- if any input is 1 then output is 1

|  |  |  |
| --- | --- | --- |
| A | B | A OR B |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |

NOT Operator – if input is 0 then output is 1 and if input is 1 then output is 0

|  |  |
| --- | --- |
| A | NOT A |
| 0 | 1 |
| 1 | 0 |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5) 🡪 False (0)

not (5 > 4) 🡪False(0)

(5 > 4) or (3 == 5) 🡪True(1)

not ((5 > 4) or (3 == 5)) 🡪False(0)

(True and True) and (True == False) 🡪False(0)

(not False) or (not True) 🡪True(1)

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 assign the values in to a certain variable.

Example- a=5.

Equal to operator is used for comparison between two values.

Example – a=5 , b=6

if(a==b):

pass

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')

Three blocks in the above codes are :

1. if spam == 10:

print('eggs')

2. if spam > 5:

print('bacon')

3. 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')

elif (spam ==2):

print('Howdy')

else :

print('Greeting!')

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

ALT+CTRL+DEL to open task manager and then End the current running task.

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

Break is used to come out of the scope or loop is the certain condition matches.

Continue is used to continue the execution flow is the certain condition matches.

For example:

|  |  |  |
| --- | --- | --- |
| for val in "string":  if val == "i":  break  print(val)  print("The end") |  | for val in "string":  if val == "i":  continue  print(val)  print("The end") |

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

All three are same and hence they all will produce the same output i.e 0 to 9

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(0,10,1):  print(i) |

|  |
| --- |
| n=int(input("Enter a number"))  s = 0  i = 1  while i <= n:  s = s + i  i = i+1  print("The sum is", s) |

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

def bacon():  
  print("Hello from a Bacon")  
  
**bacon()**