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

Answer: True and False

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

Answer: AND , OR and 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 ).

Answer:

AND Gate:

|  |  |  |
| --- | --- | --- |
| A | B | A AND B |
| T | T | T |
| T | F | F |
| F | T | F |
| F | F | F |

OR Gate:

|  |  |  |
| --- | --- | --- |
| A | B | A OR B |
| T | T | T |
| T | F | T |
| F | T | T |
| F | F | F |

NOT Gate:

|  |  |
| --- | --- |
| Input | Output |
| T | F |
| F | T |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5)

Answer: False

not (5 > 4)

Answer: False

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

Answer: True

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

Answer: False

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

Answer: False

(not False) or (not True)

Answer: True

5. What are the six comparison operators?

Answer: ==, >, <, >=, <=, !=

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

Answer: Assignment operators are used for assigning a value to a variable

Ex: a= 10 , Here value 10 is assigned to variable a

Equal to operator is denoted by == which is used to compare if the value and datatype is same

Ex: a= 10 , b=5

If a==b:

Print(“they are equal”)

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')

Answer: There is indentation missing for all the print statements, the second condition can be defined as elif instead of if , if the requirement was to exit code once the first condition is satisfied.

Correct code:

spam = 0

if spam == 10:

print('eggs')

elif 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=int(input(“enter the value”))

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?

Answer: Ctrl+Alt+del

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

Answer: Break statement will exit the loop completely where as continue wont exit the loop and instead send the same value to the variable and continue the loop.

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

Answer: Range(10) will start the value from 0 and end at 9

Range(0,10) will start the value from the specified first value and ends at ending value -1

Range(0,10,1) will start the value from specified first value and ends at ending value -1 and the 3rd value will decide how many steps have to jumped between each value.

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.

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

Print(i)

start=1

end=10

while start <= end:

print(start)

start = start +1

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

Answer: spam.bacon()