

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

Sol: True and False

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

Sol: 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 evaluates to).

Sol: True and True is True.

True and False is False.

False and True is False.

False and False is False.

True or True is True.

True or False is True.

False or True is True.

False or False is False.

not True is False.

not False is True

4. What are the values of the following expressions?

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

sol: False

not  $(5 > 4)$

sol: False

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

Sol: True

not  $((5 > 4) \text{ or } (3 == 5))$

Sol: False

$(\text{True and True})$  and  $(\text{True} == \text{False})$       Sol: False

(not False) or (not True)

Sol: True

5. What are the six comparison operators?

Sol: ==, !=, <, >, <=, >=

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

Sol: assignment operator "=" stores a value in a variable whereas == equal to operator compares two values and gives boolean output is true or false.

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')
```

Sol: print('eggs')

```
if spam > 5:
```

```
    print('bacon')
```

```
else:
```

```
    print('ham')
```

```
    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=int(input())
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: CTRL+ C

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

Sol: Break statement breaks the loop and comes out of loop.

Continue statement send the control back to the start of loop.

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

Sol: ALL three are same.

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 i in range(1,11):
    print(i)
a=1
while (a<11):

    print(a)
    a=a+1
```

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

Sol: `import spam`  
`spam.bacon()`