Python Conditionals Post-Assessment Answer Key

1. Here is a simple if statement with a typo. This code checks if a number is odd. However, there is a typo in the code. Can you find the typo and fix it?

```
def is_even(number):
   if number % 2 == 0:
     return True
   else:
     return False

print(is_even(3))
```

The typo in the first if statement is in the line number % 2 == 0. The correct line should be number % 2 == 1. This is because the if statement is checking if the number is odd, not even.

2. Here is an if statement with a logic error. This code checks if a number is greater than or equal to 10. Can you find the logic error and fix it?

```
def is_greater_than_or_equal_to_10(number):
   if number > 10:
     return True
   else:
     return False

print(is_greater_than_or_equal_to_10(9))
```

The logic error in the second if statement is in the line if number > 10:. The correct line should be if number >= 10:. This is because the if statement is checking if the number is greater than or equal to 10, not just greater than 10.

3. Here is an if statement with a runtime error. This code checks if a number is divisible by 5. Can you find the runtime error and fix it?

```
def is_divisible_by_5(number):
   if number % 5 == 0:
     return True
   else:
     return False

print(is_divisible_by_5("hello"))
```

The runtime error in the third if statement is in the line print(is_divisible_by_5("hello")). The code will cause a runtime error because the function is_divisible_by_5() expects an integer as input,

but the string "hello" is not an integer. To fix this error, you would need to change the input to an integer, such as 10.