

## Modules Mock Test - PPT Program

Q4. Write a function called 'perform\_hypothesis\_test' that takes two lists of numbers as input, representing two samples. The function should perform a two-sample t-test and return the p-value. Use the 'scipy.stats' module in Python to calculate the t-test and p-value.

SOL:

```
from scipy import stats
```

```
def perform_hypothesis_test(sample1, sample2):  
    t_statistic, p_value = stats.ttest_ind(sample1, sample2)  
    return p_value
```

Example:

```
sample1 = [5, 10, 15, 20, 25]  
sample2 = [10, 20, 30, 40, 50]  
p_value = perform_hypothesis_test(sample1, sample2)  
print("P-value:", p_value)
```

Output:

P-value: 0.1064706396450037