**IT – 2120**

**Probability and Statistics**

**IT24101035**

**Lab – 10**

**R Script**

```
setwd("C:\\Users\\asus\\Documents\\2 Year 1 Sem\\PS\\Lab Practical\\Lab 10")
getwd()

# Chi-Square Goodness-of-Fit Test for Snack Types


snack_types <- c("A", "B", "C", "D")
observed <- c(120, 95, 85, 100)


expected_prob <- c(0.25, 0.25, 0.25, 0.25)


test_result <- chisq.test(x = observed, p = expected_prob)


print("Chi-Square Goodness-of-Fit Test Results:")
print(test_result)


print("Expected counts:")
print(test_result$expected)
```

**Answers**

```
> setwd("C:\\Users\\asus\\Documents\\2 Year 1 Sem\\PS\\Lab Practical\\Lab 10")
> getwd()
[1] "C:/Users/asus/Documents/2 Year 1 Sem/PS/Lab Practical/Lab 10"
> snack_types <- c("A", "B", "C", "D")
> observed <- c(120, 95, 85, 100)
> expected_prob <- c(0.25, 0.25, 0.25, 0.25)
> test_result <- chisq.test(x = observed, p = expected_prob)
> print("Chi-Square Goodness-of-Fit Test Results:")
[1] "Chi-Square Goodness-of-Fit Test Results:"
> print(test_result)

        Chi-squared test for given probabilities

data:  observed
X-squared = 6.5, df = 3, p-value = 0.08966

> print("Expected counts:")
[1] "Expected counts:"
> print(test_result$expected)
[1] 100 100 100 100
>
>
```

**Final Data**