**Assignment 5 Template**

**LAST NAME:**

**FIRST NAME:**

**USERID:**

**UWaterloo ID:**

**Problem 1: Fill in the information below based on your data which were generated using your ID number as the seed for the random number generator.**

**Insert the table of observed and expected frequencies here.**

**The hypothesis of interest is that the data arise from a Multinomial model with equal probabilities.**

**The observed value of the likelihood ratio statistic for testing this hypothesis**

**=**

**The degrees of freedom for the Chi-squared distribution =**

**The p-value =**

**Insert your conclusion regarding the hypothesis here.**

**The observed value of the Pearson Goodness of Fit statistic for testing this hypothesis =**

**The degrees of freedom for the Chi-squared distribution =**

**The p-value =**

**Insert your conclusion regarding the hypothesis here.**

**Problem 2: Fill in the information below based on your data which were generated using your ID number as the seed for the random number generator.**

**Model =**

**Insert the original table of observed and expected frequencies here.**

**Insert the table of observed and expected frequencies after collapsing here.**

**The hypothesis of interest is the data arise from a Poisson model.**

**The observed value of the likelihood ratio statistic for testing this hypothesis**

**=**

**The degrees of freedom for the Chi-squared distribution =**

**The p-value =**

**Insert your conclusion regarding the hypothesis here.**

**The observed value of the Pearson Goodness of Fit statistic for testing this hypothesis =**

**The degrees of freedom for the Chi-squared distribution =**

**The p-value =**

**Insert your conclusion regarding the hypothesis here.**

**Problem 3: Fill in the information below based on your data which were generated using your ID number as the seed for the random number generator.**

**Number of observations =**

**Insert the table of observed frequencies here.**

**Insert the table of expected frequencies here.**

**The hypothesis of interest is that the variate smoking and the variate height are independent variates.**

**The observed value of the likelihood ratio statistic for testing this hypothesis**

**=**

**The degrees of freedom for the Chi-squared distribution =**

**The p-value =**

**Insert your conclusion regarding the hypothesis here.**

**The observed value of the Pearson Goodness of Fit statistic for testing this hypothesis =**

**The degrees of freedom for the Chi-squared distribution =**

**The p-value =**

**Insert your conclusion regarding the hypothesis here.**

**Suppose for your data you found evidence of a relationship between smoking and height. Can you conclude that a person’s height affects whether they smoke or not? Why or why not?**