**LAB 3 ASSIGNMENT: MARKING SCHEMA**

Proper header and appearance: 10 points (see cover page format on eClass; labs must be **typed**)

**Question 1 (6)**

Observational study or randomized experiment: 2 points

Generalizations to a broader population: 2 points

Causal inferences: 2 points

**Question 2 (4)**

Number of cases: 1 point

Categorical variables: 2 points

Numerical variables: 1 point

**Question 3 (40)**

1. Frequency table of survival: 2 points

Overall survival rate: 3 points

1. Three families that proportionally lost most of their members: 2 points
2. Frequency table of survival rate by group (alone vs. not): 2 points

Survival rate of members travelling alone vs. not alone: 2 points

1. Frequency table of survival by gender: 2 points

Bar chart of survival for females: 3 points

Bar chart of survival for males: 3 points  
Comments: 2 points

1. Frequency table of survival rate by group (child vs. adult): 2 points

Comments: 2 points

1. Summaries of survivors and non-survivors: 2 points

Side-by-side boxplots: 3 points

Comments: 4 points

1. Summary statistics of age of survivors and non-survivors for males: 2 points

Summary statistics of age of survivors and non-survivors for females: 2 points

Comments: 2 points

**Question 4 (38)**

1. Contingency table of survival by gender: 4 points
2. Hypotheses: 2 points  
   The value of the test statistic: 2 points

The distribution of the test statistic under the null hypothesis: 2 points

The *P*-value: 2 points

Conclusion: 2 points

1. Percent of the survivors that were females : 2 points

Percent that were female survivors: 2 points

1. Hypotheses: 2 points  
   The value of the test statistic: 2 points

The distribution of the test statistic under the null hypothesis: 2 points

The *P*-value: 2 points

Conclusion: 2 points

1. The relationship between the tests in parts (a) and (b): 3 points
2. 95% confidence interval: 3 points

Interpretation of the 95% confidence interval: 2 points

Comparison of the confidence interval with the outcome of the test: 2 points

**Question 5 (18)**

1. Contingency table of survival by Bin(Age): 4 points

Age groups with two highest survival rates: 2 points

Age groups with two lowest survival rates: 2 points

1. Hypotheses: 2 points

The value of the test statistic: 2 points

The distribution of the test statistic under the null hypothesis: 2 points

The *P*-value: 2 points

Conclusion: 2 points

**Question 6 (18)**

1. Contingency table of survival by group size: 4 points

Comments on lowest/highest survival rates: 2 points

Answers to other questions: 2 points

1. Hypotheses: 2 points  
   The value of the test statistic: 2 points

The distribution of the test statistic under the null hypothesis: 2 points

The *P*-value: 2 points

Conclusion: 2 points

**Question 7 (5)**

Summary: 5 points

**TOTAL = 139**

Created by: Henryk Kolacz;

Edited by: Paul Cartledge

University of Alberta

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