

## Applied Stats II Exam One Review

**Disclaimer:** The following questions are meant to serve as preparation, and are examples of what may appear on the first exam. Do not rely on this content as your sole means of preparation, this is meant to guide your studying.

### 1 Terms

Be able to define these terms and describe why they're important:

- Parameter vs. statistic
- Maximum likelihood estimation
- Normalising constant
- Canonical form
- Link function
- Fisher information
- Generalized linear model
- Log-likelihood function
- Exponential family form
- "Moments" of our estimators
- Odds ratio
- Hessian matrix

### 2 Calculate/execute these concepts:

- Interpret y-intercept and slope for a logistic regression
- Write a prediction equation
- Construct a CI around  $\beta$
- Conduct a hypothesis test for  $\beta$
- Calculate standard error for  $\beta$
- Interpret a regression analysis table
- Interpret regression coefficients