

Problem Set: Chapter 12 Comparing 2 means

Name: \_\_\_\_\_

Discussion among students is encouraged but all answers must be written in your own words. Points will be deducted if you answers are identical to other students.

Stalk-eyed flies

|             |     |  |
|-------------|-----|--|
| Ch 12<br>18 | a)  | What is the best test to use: 1-tailed t-test / paired t-test / 2-sample t-test        |
|             |     | Why:   |
|             | new | What is the sample size within each diet group? _____                                  |
|             | new | What type of variable is "diet" _____  |
|             | new | There are fewer bars in the corn diet histogram (4 bars) vs. cotton diet (11ish). Why? |

Genes *per* versus *tim* mutations

|    |     |   |
|----|-----|---|
| 19 | new | What is the impact on "power" of the samples sizes being different?<br>Power is ..... Increased / decreased / not changed /<br>..... the concept of power isn't relevant here |
|    | b   | Are the variances (var) the same or different? Same / different   |
|    |     | Show calculation:   |
|    | new | What is the best test to use: 1-tailed t-test / paired t-test / 2-sample t-test   |
|    |     | Why:  |

## ENS 495 Fall 2017

### Problem Set: Chapter 12

#### Electric fish

|    |     |   |
|----|-----|---|
| 20 | new | What is the best test to use: 1-tailed t-test / paired t-test / 2-sample t-test<br>Why: |
|    | c   | What "assumptions" do you have to make to carry out this analysis?                      |

#### Seals

|    |     |   |
|----|-----|---|
| 24 | new | What is the best test to use: 1-tailed t-test / paired t-test / 2-sample t-test<br>Why: |
|----|-----|---|

#### Hyeanas

|    |     |   |
|----|-----|---|
| 27 | new | What is the best test to use: 1-tailed t-test / paired t-test / 2-sample t-test<br>Why: |
|----|-----|---|

#### Bluegilss

|    |  |                                     |
|----|--|-------------------------------------|
| 30 |  | What is wrong with this conclusion: |
|    |  | What analysis should've been done?  |