#### Florida State University College of Criminology and Criminal Justice Ph.D. Comprehensive Examination in Research Methods and Statistics, Spring, 2019 Day One of the Exam, March 27, 2019: 8:30am to 12:45pm

#### **INSTRUCTIONS**

Answer one question from each of the two sections below. Please notify the proctor when you are finished. Please note: Once a student takes possession of the examination at the start of the exam period, this constitutes an attempt at taking the exam, regardless of whether the student completes the exam, hands in any answers, or remains for the full exam period.

# I. DATA GATHERING METHODS

1. Provide specific examples of how questionnaire design may influence the quality of any resulting survey data. What are examples of flawed questionnaire designs? How are the questions used in a questionnaire directly connected to sampling and analysis considerations?

2. Describe the techniques of snowball sampling, simple random sampling, stratified sampling, and cluster sampling. For each technique, discuss strengths and weaknesses, and provide an example of when each technique might be particularly useful.

### **II. RESEARCH DESIGN**

3. Describe a narrative review of literature. Describe what meta-analysis entails. Compare the strengths and weaknesses of each approach.

4. Choose a research question that could be studied by criminologists in both of the following ways: 1) using an experimental design with random assignment; 2) using survey data where the researcher does not have the ability to assign subjects to groups. Describe how the two approaches could be implemented to address your research question, including how subjects would be selected, how data would be gathered, and how results would be obtained. Finally, describe several potential strengths and weaknesses of each approach.

#### Florida State University College of Criminology and Criminal Justice Ph.D. Comprehensive Examination in Research Methods and Statistics, Spring, 2019 Day One of the Exam, March 28, 2019: 8:30am to 12:45pm

#### **INSTRUCTIONS**

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## **III. STATISTICS**

1. Explain what mediation is and how you can statistically test for it. Provide an example of how testing for mediation would be help with testing theory. Explain what moderation is and how you can statistically test for it. Provide an example of how testing for moderation would be help with testing theory.

2. Multilevel modeling is a versatile statistical technique that can be used in a number of different research scenarios. Describe multilevel modeling and provide two examples of when multilevel modeling would be an appropriate statistic to use.

## **IV. DATA INTERPRETATION**

3. Interpret the findings of the attached article by Payne and Welch. This means that you should tell what the results mean with respect to the goals of the researchers and what they were trying to find out, just as if you were writing the Results and Discussion/Conclusion sections of the journal article. Do not merely repeat in words what is already shown in numbers in the tables. What conclusions would follow from the results? What problems with the methods might undermine or weaken these conclusions?

4. Interpret the findings of the attached article by Nix et al.. This means that you should tell what the results mean with respect to the goals of the researchers and what they were trying to find out, just as if you were writing the Results and Discussion/Conclusion sections of the journal article. Do not merely repeat in words what is already shown in numbers in the tables. What conclusions would follow from the results? What problems with the methods might undermine or weaken these conclusions?