Exam Format (GISC6301, Fall 2019)

Date:

Wednesday, Dec 11, 5:00-7:45 pm, GR3.602

Rules and Guidelines:

- The exam will be ***open book*** and ***open notes***.
- The use of a computer is ***solely restricted*** to looking up the lecture notes, sample answers etc. and to use ***R*** for evaluating distributions (if need, it also can be done with the tables in the back of BBR).
- The use of the internet, email etc. and any other communication channels is ***strictly prohibited***.
- The number of points for each task is ***proportional*** to time that you should devote on the task. E.g., if the exam has in total 60 points and should be solved in 2 hours then time yourself for 2 minutes per point.
  Note: The exam grade will be rescaled to 30 points counting towards your final grade.
- Time is your main obstacle. ***Organize*** your notes and be ***familiar*** with their content.
- If you run out of time, at least randomly provide answer for the True/False Questions.
- You can use a pocket calculator

There will be 4-6 short answer questions and 10-20 True/False Questions (including the underlying rational of your decision).

Exam relevant:

- Lecture notes with a focus on conceptional issues
- Tasks exercised in the labs
- BBR Text book with a focus on conceptional issues

Exclusions:

- Explicitly using R to perform data analyses. However, you should be familiar with some key R commands and may be asked of what these commands are doing.
- Anything labelled in the lecture notes ***not test relevant***.
- Not Lander and Kabakoff

Example Short Answer Questions: Interpretation of Analyses

You may be given output from

- a regression model,

- t-test comparing means,
- data visualization
- etc.

You task will be to interpret the output along some a set guiding questions provided to you.

Example Short Answer Question: Descriptive Statistics [6 points]

25 households were asked to how many newspapers and journals they subscribe to. The number of subscriptions was: 0,0,0,0,0,1,1,1,1,1,1,2,2,2,2,3,3,3,4,4,4,5,6,6,8.

(a) Construct the frequency and cumulative frequency table: [2 points].

# of print media	Frequency	Relative Frequency in %	Cumulative Frequency	Relative Cumulative Frequency
0				
1				
2				
3				
4				
5				
6				
7				
8				
Total	25	100 %		

(b) What are the mode, median and mean? [1.5 points]

(c) Based on the locational measures, is the distribution of the number of subscriptions positively or negatively skewed? Justify your answer based on the relationship between these three location measures. [2.5 point]

Example True/False Questions (several of these):

Mark either the true or false box to indicate whether the following statements are true or false (1 point). Briefly justify your choice (1 point).

1. [TRUE] [FALSE]: The mean minimizes the sum of the squared differences.

In contrast the median minimizes the sum of the absolute difference. OR The distribution is balanced around the mean. OR The mean satisfies the least squares criterion

2. [TRUE] [FALSE]: The equality $\prod_{i=3}^{4} i = 1 \cdot 2 \cdot 3 \cdot 4$ holds.

This is $\prod_{i=3}^{4} i = 3 \cdot 4$. OR This is $\prod_{i=1}^{4} i = 1 \cdot 2 \cdot 3 \cdot 4$