# EXAM 3 PRACTICE PROBLEMS

PUBPOL 2130 / INFO 3130
MOON DUCHIN, SPRING 2025

The test will have around 15-20 multiple choice questions. If you spend 2-3 minutes on each, you'll be done in well under an hour. Here are some sample questions.

(1) In Healy's chapter on organ donations, he mentions that the life insurance market was "initially controversial." We discussed this in class. Why was it controversial?
    (a) It seems suspiciously or excessively altruistic.
    (b) It was thought to commodify something spiritual.
    (c) The initial market was wildly mis-priced, in discriminatory ways.

(2) In Rodden's interview, he says "The Democrats didn't clearly become the party of urban workers until around the New Deal." What is the relevance of the New Deal for his argument about density and politics?
    (a) The New Deal included a boom in the kinds of construction projects that both created jobs and created dense housing in cities.
    (b) It was a time of hyper-inflation, and higher prices led to increased power for labor unions.
    (c) The New Deal began the shift of the Solid South along racial lines.

(3) Donald Shoup writes that "Free curb parking presents a classic 'commons' problem," referring to the concept of *the tragedy of the commons*. Which of these best describes the concept?
    (a) People don't value things that are free.
    (b) Public spaces decline rapidly when government funding is cut, resulting in the deterioration of shared neighborhood resources.
    (c) Policymakers make bad decisions when under pressure to look effective.
    (d) Shared resources need collective restraint, but individual incentives drive selfish behavior.

(4) True or false? In *Crabgrass Frontier*, Kenneth Jackson argues that U.S. cities follow patterns that are typical around the world.
    (a) True, mainly driven by uncontrolled gentrification.
    (b) True, because the suburbs vote for conservatives.
    (c) False, because they don't have sharp edges and their urban characteristics drop off slowly.
    (d) False, because they are much smaller than mega-cities of Asia and Latin America.

(5) In his law review piece on the long-term effects of redlining, Rothstein describes an experiment by *Long Island Newsday*. What did they do?
    (a) Studied the relationship between school districts and home prices.
    (b) Conducted "paired testing" of realtors using undercover actors.
    (c) Called in complaints about hazardous road conditions in different parts of Suffolk County to measure the response time.
    (d) Invented the "social vulnerability index" and tested the hypothesis that its variance is largely explained by redlining.

(6) True or false? Census blocks can be totally made up of water, and can have zero population.
    (a) True, but this is very rare and over 90% of census blocks have 100-500 people.
    (b) True, and different states have different standards about how to draw their blocks, so the properties can vary strongly from state to state.
    (c) False, since they are used as precincts for voting.
    (d) False, since there are legal upper and lower limits on the population of a block.

(7) Which of these things is true about the ACS? *Choose all that apply.*

   (a) It is based on an annual survey.

   (b) It includes variables about household details, like language spoken at home and whether the house has wireless internet.

   (c) Raw microdata is publicly available.

   (d) It includes mobility data for moves from county to county.

(8) Which of these is reasonably represented as a network? *Choose all that apply.*

   (a) A map of connections between social media users.

   (b) A linear program to solve for the fastest transit route from point A to point B.

   (c) The street grid in a city.

   (d) The entropy of a redistricting plan.

(9) Here is a line from the Python notebook on redlining.

```
queens_bronx_areas_gdf["score"] = queens_bronx_areas_gdf["grade"].map("A":3, "B":2, "C":1, "D":0)
```

   Which of these is true?

   (a) This creates a new `score` column by using a dictionary to transform the `grade` column.

   (b) This modifies the `score` column by appending letter grades.

   (c) This plots a map of several areas of New York City that is color-coded by HOLC classification.

(10) In the notebook on evictions, one code block includes the following.

```
cmap="YlOrRd",
#cmap="PuOr",
```

   By changing which one is commented out, this lets you toggle back and forth between a **sequential** and a **divergent** colormap. What kind of data is most suitable for a divergent colormap?

   (a) Choropleth data that can take both positive and negative values.

   (b) Scatterplot data with high variance in the $y$ coordinate.

   (c) Data where you want to visualize uncertainty.

   (d) Values that grow exponentially.