**Review Questions for Final Exam**

**Land Rent Gradient**

* Be able to interpret the bid rent functions for commercial uses of land, $\frac{∆R}{∆μ}=\frac{-t∙B}{T}$ and non-commercial, household uses, $\frac{∆P}{∆μ}=\frac{-t}{H}.$
* In the original monocentric model, why is location in the center of the urban area considered valuable? For most cities, what is its value today?
* What cost is being traded with land costs as we move away from the center of the city?
* What effect does decreasing transportation cost have on the rent function, and on the resulting size of the urban area?
* Use the rent functions to explain why households with a smaller demand for space may outbid larger demand households for locations closer to the city center.

**Education and Residential Sorting**

* Why does the public provision of *free* public education cause a kink in the budget choices for families with children?
* How do vouchers alter the budget choices for the family with kids?
* How do vouchers alter the relationship between place of residence and the consumption of education?
* How could vouchers possibly alter the income sorting of households within a metropolitan area?

**Recent Changes in housing market**

* How does the Case Shiller index measure changes in housing prices?
* What has been the recent pattern in housing prices in urban areas?

**Urban decline and durable housing**

* What is meant by housing being durable?
* What does the elasticity of supply indicate about the response of suppliers to changes in price?
* Why is the supply of housing completely inelastic over the range of prices below construction costs?
* How is it that cities could potentially grow at a dramatic pace but are unlikely to decline quickly?
* Why would declining cities experience housing price changes that are larger than the housing price changes in growing cities?
* Why would declining cities attract lower income people?

**Transportation**

* What are the advantages and disadvantages of cars versus other means of commuting?
* Distinguish between the different stages of a trip to work: 1. Collection phase 2. Line Haul phase 3. Distribution phase. What are the advantages/disadvantages of private and public transportation for the different commuting phases?
* In designing a public transportation system, what are the tradeoffs in determining the number of vehicles per time period and the frequency of stops for a specific bus or rail line?
* Compare buses to rail: what are the costs and benefits of the two forms of public transportation?

**Urban Economic Growth**

* Be able to interpret the data showing the economic structure of a metropolitan area.
* In the economic base model, how do we distinguish exporting industries from non-exporting?
* What information does an urban area's calculated multiplier provide?

**Cities and Global Warming**

* What is global warming?
* In what way is global warming related to economic activity?
* What is the connection between the density of economic activity and the emission of greenhouse gases?
* What role does region within the US play in determining the emission of greenhouse gases?