

**Midterm II**  
**Economic Development - ECG 540**

**Instructions:** Please answer ONE QUESTION ONLY in each section. You may find it useful to use mathematics or graphs in your answers; these are not necessary, however, as long as you clearly communicate the relevant concepts from the assigned readings and classroom discussion.

**I. ANSWER ONE PART ONLY (a OR b)**

a. Consider a hypothetical yield-enhancing seed variety that is not universally adoptable. Assume that the economy is closed with respect to the crop in question – i.e., prices are determined domestically. Describe the welfare effects of the new variety that are transmitted through output markets (i.e., ignore labor market effects). Include in your answer the impact on the following four types of households: Adopting net consumers, adopting net producers, non-adopting net consumers, and non-adopting net producers. **(40 points)**

b. Consider a semisubsistence agricultural household that both produces and consumes wheat. If the price of wheat rises, will wheat consumption increase or decrease? Will marketed surpluses of wheat increase or decrease? Does it matter if the household is a net seller or net purchaser of wheat? **(40 points)**

**II. ANSWER ONE PART ONLY (a OR b)**

a. Consider a semisubsistence agricultural household that both produces and consumes a staple food crop. The only variable input in the production process is labor. Household utility depends only on consumption of the staple food and leisure. Will the household always be better off when a labor market exists? If a labor market exists, which type of households are better off – net sellers of labor or net purchasers of labor? Explain your reasoning. **(30 points)**

b. De Janvry and colleagues use the idea of price bands to describe the concept of market failure in semisubsistence agriculture. What determines the width of price bands? Are price bands the same width for every household? Explain why a household's participation in the marketplace depends on whether or not the household's demand and marginal cost (supply) curves cross within the price band. **(30 points)**

**III. ANSWER ONE PART ONLY (a OR b)**

a. We generally expect the uncertainties associated with farming to have a negative effect on the output of agricultural households in developing countries. Why is this so? Does it matter if the household is risk averse or risk neutral? Under what conditions would household supply under uncertainty not be less than household supply under certainty? **(30 points)**

b. Diffusion of new technologies within a particular geographic area tends to follow an S-shaped pattern over time, rising steeply and then levelling off at a maximum (“ceiling”) level of aggregate adoption. What explains how steeply the diffusion curve rises? Why might the aggregate adoption ceiling be less than 100%? **(30 points)**