

Exam ARE 201
Fall 2003

Attempt to answer all questions. Your answers should be short. Each question shows the number of points that the question is worth.

1.(35 points) Use a two-commodity model, with food and cloth; put food on the horizontal axis of any graph that you draw. Cloth is the numeraire good. Measure welfare using indifference curves of the representative consumer. Provide a brief explanation of your answers.

Consider a small country. At the *initial* world price p^w this country imports food and exports cloth.

(a) Suppose that there are no taxes or any other distortion. Is the welfare effect of an exogenous *large* increase in the world price of food positive, negative or ambiguous?

(b) Now suppose that the country taxes domestic production of food. The ad valorem tax is τ , so the domestic producers' relative price of food is $(1 - \tau)p^w$. Consumers face the world relative price. The tax τ is constant. Is the welfare effect of an exogenous small increase in p^w positive, negative or ambiguous?

(c) Alter the situation in part (b) by dropping the assumption that τ is constant. Suppose that following an increase in p^w the country makes an offsetting increase in τ so that domestic producer price remains constant. Is the welfare effect of an exogenous small increase in p^w positive, negative or ambiguous?

2.(30 points) Choose the import good as the numeraire and let p be the price of the export good for a small open economy. How does an increase in p affect the real return to labor in the (a) Ricardian and (b) Sector-specific factor (Ricardo-Viner) models. (Labor is mobile across sectors.) Provide a brief explanation of your answers.

3. (30 points) Consider a two-sector H-O-S model with no factor intensity reversals and incomplete specialization. Sector 1 creates no pollution. Production in Sector 2 creates λ units of pollution per unit of output. The (small) country allows free trade and exports the commodity produced in

Sector 2. There is no possibility for abatement. (a) How does an increase in a pollution tax, t , affect nominal and real factor returns? (b) For a zero pollution tax, how does an exogenous increase in labor affect the amount of pollution?

4. (5 points) Comment on the claim that trade liberalization results in job losses and lower wages.