<mark>SOLUTIONS</mark>
I have only put a few bullet points for the essay questions

Economics 340 -- Fall 2019 Practice Final Exam
Hunter College
Prof. Conning

Please answer all questions on the bubble sheet.
(13 sample questions, on the real exam expect 20-25)

1) In the 2-factor (labor and capital), 2 good Heckscher-Ohlin model (and assuming product prices remain constant), capital accumulation over time should:

   a. shift the production possibility curve outward and decrease the production of the labor-intensive product. *(see Rybcyznski Theorem, ch5)*
   b. shift the production possibility curve outward, and increase the production of both goods.
   c. shift the production possibility curve outward and only increase the production of the labor-intensive product.
   d. move the point of production along the production possibility curve.

2) In the Specific Factors Model with mobile labor an increase in the relative price of agricultural goods will:

   a) raise the real wage of agricultural workers.
   b) raise the real return to capitalists in the manufacturing sector.
   c) raise or lower the real wage of workers depending on the importance of agricultural goods in their consumption baskets *(ch4 'neoclassical ambiguity')*
   d) lead to a higher wage rate in the agricultural sector compared to the manufacturing sector.

3) In the simplest intra-industry trade model with increasing returns and monopolistic competition, which happens

   a) the total number of varieties *produced* in *each* country increases and prices fall.
   b) consumers gain from more product varieties sold, prices fall and real wages rise so welfare rises for all workers.

c) real wages rise in the larger country and fall in the smaller.
d) national income increases but income inequality worsens.

4) In the simple model of offshoring what happens to the relative wages of skilled labor when there is a change in the trading costs and more offshoring takes place? Assume Home is the country where production was originally located entirely.

   a) It falls in the Home country and rises abroad
   b) It rises in the Home country and falls abroad
   c) It falls in both countries
   d) It rises in both countries

5) The economy produces agricultural goods and manufacturing goods only. Assuming no market failures free trade is the first-best policy. Which of the following production subsidies or taxes creates *the least* distortion (assume monies for subsidies as well as any revenues from taxes are raised or returned to citizens in non-distorting fashion):

   a) A production quota (with a 20% tariff equivalent) on good X.
   b) A 20% tariff on the importation of good X
   c) **A 20% production subsidy to good X** *(all the others distort more because have production subsidy + consumption tax implications)*
   d) A 20% production subsidy and a 20% consumption tax on good X

6. Which of the following effects would we expect from the introduction of a corn export subsidy in a *small open economy*:

   a. An increase in the world market price of corn
   b. An increase in the domestic price of corn *(producers get $ subsidy for selling abroad so will only also sell domestically if they can raise domestic price.)*
   c. A reduction of corn exports
   d. An increase in domestic corn consumption

7. When a country enters into a Preferential trade arrangement (PTA) we expect both positive trade _____ as well as negative trade _____ effects.

   a. spillovers; agglomeration
   b. import substitution; demotion
   c. complementarity; singularity
   **d. creation; diversion**

8. Whether it is via the channels of trade, capital accumulation, or the migration of factors across borders the neo-classical model based on the assumption of perfect substitution and production technologies with diminishing marginal products to the intensification of any one factor all predict that over time there should be a tendency toward _____ in real factor incomes across countries.
    a. monopolization
    a. entropy
    b. divergence
    c. convergence

9. In the offshoring model, as the cost of capital and transactions falls in the developing country certain activities in the production value chain that had been produced in the developed country get offshored. The model predicts that the relative demand for skilled labor will
    a. Rise in the developing country and Fall in the developed
    b. Fall in the developing country and rise in the developed
    c. Fall in both countries
    d. Rise in both countries

10. Which of the following macroeconomic identities lead to a correct account of the trade balance
    a. $Y = C + I + G + (X - M)$
    b. $Y - E = X - M$
    c. $(S - I) + (T - G) = (X - M)$
    d. all of the above *(all are re-arranged variants of the national income accounting identity in a)*

11. Think of labor demand by firms in a sector (given by the horizontal summation of each firm's downward sloping marginal value product of labor (P*MPL). If the product price remains unchanged then an improvement that raises the marginal product of every worker by say 10% should lead to _____ in labor demand and employment in the sector. However if the resulting increase in output supply leads to a sufficiently large _____ in the product price then total employment in the sector could fall:
    a. an increase, increase
    b. a decrease; increase

c. no change; fall
d. an increase; fall *(the demand for labor curve is P*MPL so all this is saying is that if P falls faster than MPL goes up the curve shifts down)*

12. Which of the following international organizations today is responsible for developing and maintaining the system of international trade rules and dealing with trade disputes?
    a. The IMF
    b. The World Bank
    c. The Generalized Agreement on Tariffs and Trade (GATT)
    d. The WTO *(replaced the GATT in 1995)*

13. Which of the following explanations is the most plausible explanation for why the United States has had a persistent trade deficit with the rest of the world over the past few decades.
    a. **Because the United States has remained an attractive destination for investment from abroad, driving expenditure (E = C + I + G) above domestic output Y.**
    b. Because wages are lower abroad than in the USA so US firms find it difficult to compete.
    c. Because other countries have been taking advantage of the USA by having higher tariffs on their products.
    d. Because we have been losing 'competitiveness' as other countries have increased their productivity faster than the USA has.

Part I. Point A depicts production and consumption in a closed economy with labor-intensive Wheat and capital-intensive Cloth. Capital and labor are both perfectly mobile across sectors (HOS model). Read all the questions, think carefully and plan your answer before drawing.
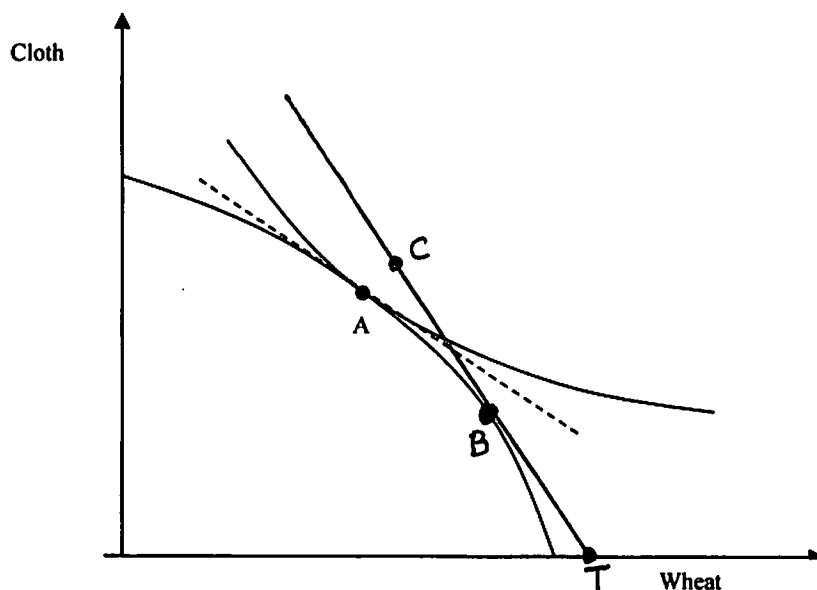
Suppose the country opens to trade and this leads to an *increase* in the relative price of labor-intensive wheat (i.e. the domestic relative price of wheat rises to now equal the world relative price of wheat).

a) Assume actors in the economy respond to the change in relative prices by moving resources across sectors. Draw a dot to represent a new equilibrium free-trade production point on the PPF at world prices. Label it as point **B**.

b) Draw the world price line running through point B. This line can also be referred to as the country's GDP line.

c) Indicate the real level of GDP measured in terms of wheat (i.e. at world prices production bundle B has the same value as how much Wheat?). Label this point **T on the Wheat axis.**

Since Wheat is relatively labor-intensive the increase in the relative price of wheat should lead to changes in the *real* wage of workers (measured in terms of either cloth or manufacturing sectors) by the following logic:

$$\frac{P_W}{P_C}\uparrow \;\Rightarrow\; \frac{w}{r}\uparrow \;\Rightarrow\; \begin{cases} \dfrac{K_W}{L_W}\boxed{\uparrow} \Rightarrow MPL_W = \dfrac{w}{P_W}\boxed{\uparrow} \\[2em] \dfrac{K_C}{L_C}\boxed{\uparrow} \Rightarrow MPL_C = \dfrac{w}{P_C}\boxed{\uparrow} \end{cases}$$

Producers respond to increase in relative price labor $\frac{w}{r}$ by switching to more k-intensive techniques in all sectors.

Where for instance the sequence $\dfrac{P_W}{P_C}\uparrow \;\Rightarrow\; \dfrac{w}{r}\uparrow$ would be read as stating that an increase in the relative price of wheat

leads to a *rise* in the wage to rental ratio w/r.

d) In the boxes above draw in either $\boxed{\uparrow}$ or $\boxed{\downarrow}$ or $\boxed{\bullet}$ to indicate how each capital-labor ratio and real wage measure changes (does it go up, down or stay the same).

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Part II. Consider the market for small passenger jets. Prices are measured in millions of dollars.
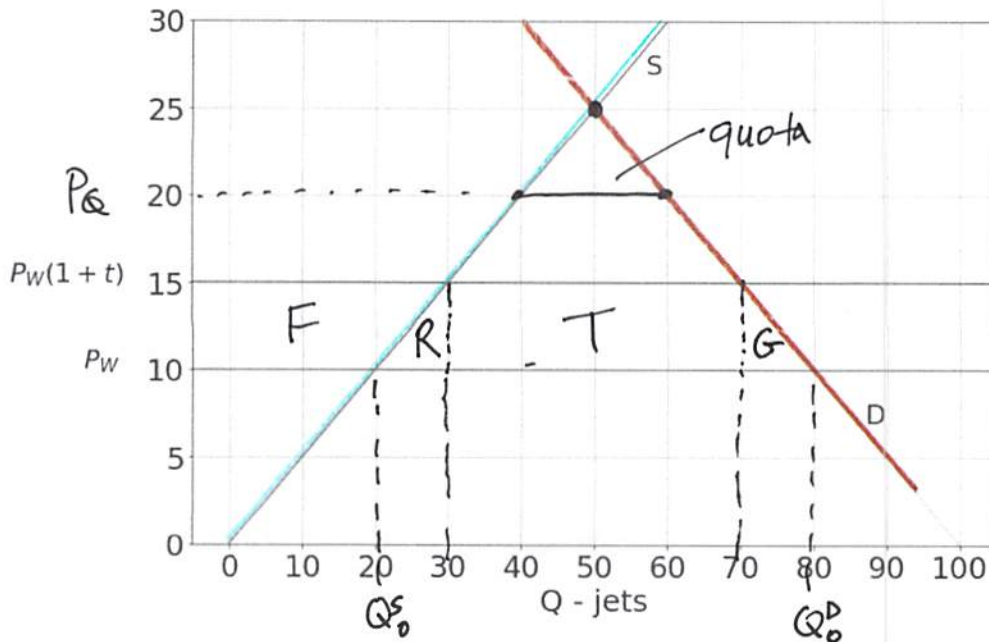
Suppose the world market price of jets is $P_W = 10$ but that economic policy **initially bans** all jet imports.
What is the closed economy market equilibrium price and quantity of of jets? $P = \boxed{25}$, $Q = \boxed{50}$

If imports are allowed at $P_W = 10$, how many jets would be imported? $\boxed{60}$

Indicate domestic demand Q_0^D and domestic produced supply Q_0^S on the horizontal axis on the graph above at this

$P_W = 10$ free trade equilibrium (e.g. indicator lines and label intersections with horizontal axis at Q_0^D and Q_0^S).

What is the *total* deadweight loss with **a total ban** on the import of jets, measured in million dollars? $\boxed{~~~~~}$ million. $\frac{1}{2} \wedge 2 \times (30 \times 15)$ 450
(hint: the area of a right triangle is ½ it's base times its height).

Suppose jet imports are now allowed with **a 50% tariff.** Indicate new domestic demand Q_1^D and domestic supply Q_1^S with this tariff.

Label the following areas on the diagram above: **F** = increase in producer surplus; **T**=tariff revenue; **R**=DWL from extra domestic resource cost; **G**=DWL from lost consumption.

Production subsidy: Suppose that instead of a tariff the government allowed imports in at the world market but paid domestic producers a production subsidy of $5 million for every jet they made.

What final price do domestic consumers pay in this subsidy setting (in $million per jet)? $\boxed{10}$

What is the total cost of the subsidy program to the government (in $million)? $\boxed{150}$ $= 30 \times 5$

Import quota: Suppose the government instead now imposes an import quota that limits the number of jet planes that can enter the market to just 20 jet planes.

What will be the *domestic* supply of jets: $\boxed{40}$

What is the tariff equivalent of this quota? $\boxed{100}$ percent. (price rises from $P_W = 10$ to $P_Q = 20$)

[II.2] Suppose you are a representative of the domestic jet industry and you have an audience with your country's minister of trade? In the space below make a convincing case for a set of government policies to support your industry via import substitution. Consider that the Trade minister is very skeptical of government interventions and conscious of the opportunity cost of resources. To convince the minister in your answer (1) state why this is an 'infant industry' and the nature of the market imperfection that you think needs government intervention; (2) briefly state why private market solutions are not available or sufficient (or how they might be helped), (3) list your preferred industrial and/or trade policy or policies and how it will help achieve the goal of addressing the issue in (1). Space is limited so be brief and use bullet points.

YOU SHOULD PREPARE YOUR OWN ESSAY ON THIS ONE!

- Last deck of slides
- Your notes on the several classes were we talked about import substitution.
- Feel free to mix in research from your own paper on the topic.

Possible other essay like questions:

II.3 Many anti-globalization protesters have argued that trade liberalization harms the poor yet many economists argue the opposite: that freer trade and factor mobility will lead to convergence or catchup of the incomes of the poor. What is the theoretical basis for this claim? How well is it supported by evidence? Who in the poorer regions of the world stand to gain and lose the most from trade? What about in the developed countries? Feel free to express your reasoned personal opinions but strive to explain your arguments.

YOU SHOULD PREPARE YOUR OWN ANSWERS. SOME ELEMENTS:

- HOS Model predicts that a country's relatively abundant factor (compared to the world) gains and its scarce factors lose as the country opens to trade. Poor countries are relatively abundant in low-skilled labor, so they stand to gain. Richer countries like the USA have a relative abundance higher-skilled labor so they stand to gain. See also Krugman piece with a more Ricardian version of this.

- See slides for evidence that in past decades the worlds' poorest have gained. Milanovic's elephant graph sums it up (see slides). World income inequality has declined, even as inequality within countries has often risen.

- Losers in the richer countries might be relatively less skilled laborers and specific factors in import competing industries. Trade can raise country incomes but unless mechanisms for redistribution (e.g. safety nets, universal benefits, trade adjustment assistance) those who lose or fear they may lose from globalization will vote for politicians who oppose trade and immigration.

II.4. David Autor and several co-authors conducted what has come to be known as the 'China Shock' papers. What does the China shock refer to? Explain the main elements of the studies' methodology and main findings. Do these studies lend more support to the Hecksher-Ohlin Samuelson model, to the Specific Factors Model, or to some other trade model?

SEE SLIDES AND THE SUMMARY ARTICLE BY AUTOR

II.5. Dani Rodrik argues that historically trade agreements were portrayed as being about reducing the deadweight loss of excessive trade protection and helping to commit governments to overcome special interests protecting rents in import-competing sectors. He argues however that modern day 'trade negotiations' are not so much about trade anymore and that other interests groups shape the issues that are negotiated. What are 'trade agreements' about then and what other special interests shape their content? Briefly discuss a few examples.

YOU SHOULD PREPARE YOUR OWN ANSWERS

SEE LAST SET OF SLIDES AND THE LAST READING POSTED TO LAUNCHPAD

II.6 What is the difference between internal and external economies of scale? Explain what market structure you are more likely to see in each case.

a) Consider the model of internal economies of scale and monopolistic competition presented in class and in the book. Explain how an increase in the market size due to free trade is welfare improving. You must discuss (i) average cost and price, (ii) competition, (iii) number of producers before and after free trade. Describe the chain of adjustments that lead to these results (10 pts)

b) Using the concept of external economies of scale, explain and show graphically the rationale behind the infant industry argument. (10 pts)

c) Have infant industry protection and import substitution policies been successful or not? Discuss factors that may account for success or failure.

YOU SHOULD PREPARE YOUR OWN ANWERS

SEE LAST SET OF SLIDES AND YOUR NOTES FROM THE SEVERAL CLASSES WHERE WE DISCUSSED THESE ISSUES.