**Economics 340 --** Spring 2019 Final Exam

Hunter College

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*Please answer all questions on a scantron sheet. Write your name on the front and also bubble your name and emplid (if easy access) on the back.*

1. The Ricardian theory of comparative advantage states that a country has a comparative advantage at wheat production if
2. output per worker of wheat is higher in that country than other countries.
3. wage rates in that country are low.
4. wheat is produced at lower opportunity cost compared to other countries.
5. Wheat is land-intensive and the country has a lot of land.
6. A country’s pattern of trade is determined by comparative advantage. If however a country has an absolute *dis*-advantage at producing both goods compared to its trading partners we would predict that country
7. would run a trade deficit
8. would run a trade surplus
9. has a lower equilibrium wage rate
10. has a higher equilibrium wage rate
11. According to the Ricardian model, a nation engaged in trade will choose a consumption bundle
12. on its production possibilities frontier.
13. inside its production possibilities frontier.
14. outside its production possibilities frontier, on its consumption possibility frontier.
15. inside its trade-partner's production possibilities frontier.
16. The Hecksher-Ohlin-Samuelson model focuses primarily on what as the source of comparative advantage across countries?
17. differences in tastes
18. differences in technology
19. differences in factor endowments
20. none of the above
21. Home is a small country. Foreign is a very large country. Which statement is true?

Marginal Products of Labor (units of output per worker)

Cloth Widgets

Home 10 20

Foreign 12 6

1. Neither country has a comparative advantage.
2. Home has a comparative advantage at both products.
3. Home has a comparative advantage at cloth.
4. Home has a comparative advantage at widgets.
5. From the table above, the opportunity cost of producing a unit of cloth, measured in terms of widgets, is \_\_\_\_\_\_\_\_ in Home and \_\_\_\_\_\_\_\_ in foreign.
6. 10/12, 20/6
7. 6/20, 12/10
8. 1/2
9. 2
10. Continuing with the above, if Home were able to improve its technology by doubling the marginal productivity of workers in both sectors then, Home’s comparative advantage in widgets would
11. remain the same and real wages would be unchanged.
12. remain the same but real wages would double.
13. remain the same but many workers would become unemployed as only half as many are needed
14. reverse (change to the other product) and real wages would be cut in half
15. By definition, a “capital abundant” country
16. Has a lot of capital, compared to other countries
17. Has a small labor force, compared to other countries
18. Has a lot of capital relative to labor, compared to other countries
19. Has more modern technology compared to other countries.
20. Chinese workers’ wages are much lower than US workers’ wages. Why might US labor productivity exceed that of Chinese workers in so many sectors?
21. The US has on average more capital per worker
22. The US has on average better infrastructure (roads, ports, legal systems, etc)
23. US workers have on average more years of schooling
24. All of the above
25. Intra-industry trade best describes the type of trade between
26. developing countries of Asia and Africa.
27. industrial countries of Western Europe and North America.
28. capital abundant and Labor abundant countries.
29. formerly communist nations.
30. In a two-sector economy that exports agriculture and imports manufacturing an import tariff of 20% on manufacturing would have the same effect on domestic relative prices as:
31. 20% subsidy to both manufacturing production and manufacturing consumption.
32. a 20% consumption tax on manufacturing consumption alone
33. a 20% tax on agricultural exports
34. a 20% income tax
35. The USA is a large country when it comes to the import of copper on world markets. If starting from a zero tariff the USA started to raise its tariff on the imports of copper we would expect the world price of copper to \_\_\_\_\_\_\_\_\_\_\_\_\_\_
36. fall
37. rise
38. stay the same
39. fall to zero
40. In the HOS model an increase in the relative price of the labor intensive good should lead to an increase in the wage rental ratio w/r and lead \_\_\_\_\_\_\_\_\_\_\_\_:
41. all firms in the economy to substitute capital for labor (increase K/L ratios in production)
42. firms only in the labor-intensive sector to substitute capital for labor (increase K/L ratios in production)
43. all firms in the economy to begin to substitute labor for capital (decrease K/L ratios)
44. firms only in the labor-intensive sector to begin to substitute labor for capital (decrease K/L ratios)
45. According to the *gravity model* of trade, trade between two countries varies \_\_\_\_\_\_\_\_\_\_ with the size of the countries (measured by GDP) and \_\_\_\_\_\_\_with the distance between the countries.
    1. Directly, directly
    2. Inversely, directly
    3. Directly, inversely
    4. Inversely, inversely
46. ‘Agglomeration externalities’ help explain the rise of cities and hi-tech clusters such as Silicon Valley. Which of the following economic assumptions is most clearly associated with this phenomena.
    1. Monopolistic competition and product differentiation based on economies of scale internal to the firm.
    2. Linear production technologies
    3. Capital-intensive production technologies
    4. Positive economic spillovers across firms
47. Which of the following effects would we expect from the introduction of a corn export subsidy in a *small open economy*:
    1. An increase in the world market price of corn
    2. An increase in the domestic price of corn
    3. A reduction of corn exports
    4. An increase in domestic corn consumption
48. When a country enters into a Preferential trade arrangement (PTA) we expect both positive trade \_\_\_\_\_\_\_\_\_ as well as negative trade \_\_\_\_\_\_\_\_\_ effects.
    1. spillovers; agglomeration
    2. import substitution; demotion
    3. complementarity; singularity
    4. creation; diversion
49. 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.
50. monopolization
51. entropy
52. divergence
53. convergence
54. 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
    1. Rise in the developing country and Fall in the developed
    2. Fall in the developing country and rise in the developed
    3. Fall in both countries
    4. Rise in both countries
55. Economies of scale that are external to the firm are often described as being associated with:
    1. Rent-seeking
    2. Negative externalities
    3. Positive spillovers across firms
    4. Price-volatility
56. A domestic refrigerator manufacturer successfully lobbies the government to impose a 50% tariff on imported refrigerators and a 0% import tariff on imported refrigerant liquid (essential to the domestic industry). The Effective Rate of Protection (ERP) on refrigerators will be:
57. 50%
58. More than 50%
59. Less than 50%
60. 0%
61. Think of the political economy of the *specific factors model.* Agriculture is produced with specific land and mobile labor and manufacturing is produced with specific capital and mobile labor. The country has a comparative advantage in agriculture. Which groups would be most likely to oppose a move from autarky to free trade:
62. Mobile laborers
63. Landlords (owners of land)
64. capitalists (owners of capital)
65. None, free trade raises all incomes
66. Think of the political economy of the *HOS model*. Agriculture and manufacturing are produced with capital and labor but agriculture is more labor-intensive. This is a labor-abundant country. Which groups would be most likely to oppose a move from autarky to more open trade :
67. Laborers (people who earn income primarily from labor)
68. Owners of capital (income primarily from capital)
69. Nobody, incomes rise for all groups in the HOS model
70. Specific factors in general
71. Suppose Harley Davidson assembles and sells motorcycles in the USA for $10,000 a unit using imported steel and other components from Canada costing $4000. There is no tariff on these intermediate components so value added at world prices is equal to $5000. Consider now two scenarios (A) Trump imposes a 25% tariff on final good motorcycles and on intermediate components; and (B) Trump imposes a 25% tariff on motorcycle components only (zero tariff on imported motorcycles). We can calculate the effective rate of protection ERP in scenarios A and B to be \_\_\_\_\_\_\_\_\_\_\_\_ respectively.
72. 25% and 40%
73. 25% and -25%
74. 40% and -20%
75. 25% and -20%
76. Which of the following macroeconomic identities lead to a correct account of the trade balance
77. Y = C + I + G + (X – M)
78. Y – E = X – M
79. (S - I) + (T – G) = (X – M)
80. all of the above
81. If a country is running a Balance of Payments deficit then its Central Bank’s policy of keeping the exchange rate pegged should lead to an ‘automatic adjustment mechanism’ which:
82. Leads to an expansion in the money supply and aggregate demand (AD)
83. Leads to a contraction in the money supply and aggregate demand (AD)
84. Leads a devaluation of the nominal exchange rate
85. Leads to a rise in the Central Bank’s foreign currency reserves
86. 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:
87. an increase, increase
88. a decrease; increase
89. no change; fall
90. an increase; fall
91. Economist Dani Rodrik writes “Today the advanced countries [that are] [most exposed](http://www.jstor.org/stable/10.1086/250038?seq=1#page_scan_tab_contents) to the international economy are also those where safety nets and social insurance programs – welfare states – are the most extensive.” Workers in the USA, he argues enjoyed until recently ‘considerable protection from imports, especially from low-wage countries [due to the US] large domestic market and relative geographical insulation.’ The USA traditionally had ‘a weak welfare state’ but this he claims now makes the US vulnerable to the rise of populist protectionist policies as workers have become more exposed to trade in recent decades. Why would there is a connection? Because
92. exposure to immigration exposes countries to socialist ideas.
93. richer countries can afford to spend more on social programs.
94. safety net programs limit workers exposure to trade-related losses and redistribute some of the gains to trade in ways that maintain political support for open trade policies.
95. he argues this happened by pure chance but it now affects country’s attitudes to trade.
96. Which of the following international organizations today is responsible for developing and maintaining the system of international trade rules and dealing with trade disputes?
    1. The IMF
    2. The World Bank
    3. The Generalized Agreement on Tariffs and Trade (GATT)
    4. The WTO
97. According to economist Dani Rodrik and some other authors, countries that are more exposed to trade (measured for example as (X + M) / GDP ) also tend to have
    1. high levels of trade protection
    2. more right-wing populist governments with anti-free trade agendas
    3. larger government social safety nets
    4. less coastline
98. 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.
99. Because the United States has remained an attractive destination for investment from abroad, driving expenditure (E = C + I + G) above domestic output Y.
100. Because wages are lower abroad than in the USA so US firms find it difficult to compete.
101. Because other countries have been taking advantage of the USA by having higher tariffs on their products.
102. Because we have been losing ‘competitiveness’ as other countries have increased their productivity faster than the USA has.

Last Name, First: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **DETACH AND RETURN WHEN COMPLETE.**

**Part I.** (15 pts) 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.

A

Wheat

Cloth

Suppose the country opens to trade and this leads to an ***increase*** in the relative price of capital-intensive wheat (i.e. the domestic relative price of wheat rises to now equal the world relative price of wheat).

1. 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**.
2. Draw the world price line running through point B. This line can also be referred to as the country’s GDP line.
3. Indicate the level of domestic consumption with a point C and a representative indifference curve. Now label on the axes points and and and .



1. 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.**
2. Indicate the level of EXPORTS on the diagram (e.g. with a label like )



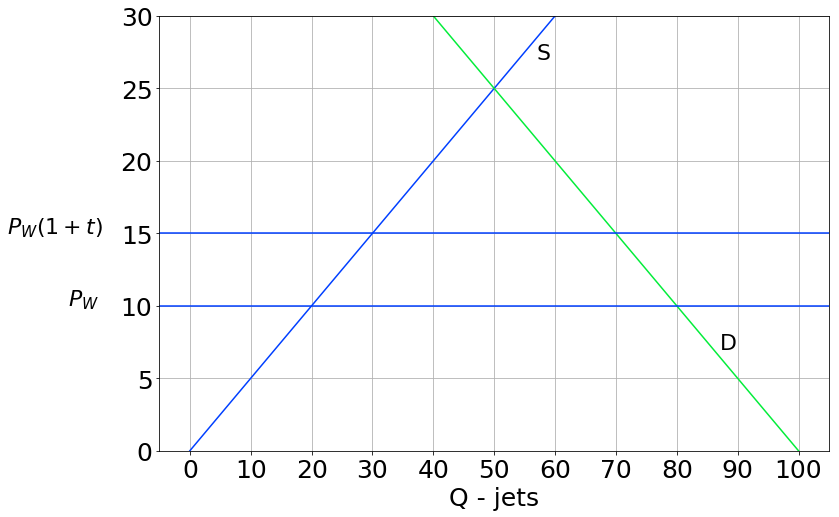
Since Wheat is relatively labor-intensive the increase in the relative price of wheat should lead to changes in the *real* wage of workers (measured in terms of either cloth or manufacturing sectors) by the following logic:



Where for instance the sequence  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* (which may be right or wrong for this question).

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

**Part II (**20pts**).** Consider the market for small passenger jets. Prices are measured in millions of dollars.



Suppose the world market price of jets is but that economic policy **initially bans** all jet imports.

What is the closed economy market equilibrium price and quantity of of jets? P = , Q =

If imports are allowed at , how many jets would be imported?

Indicate domestic demand  and domestic produced supply  on the horizontal axis on the graph above at this free trade equilibrium (e.g. indicator lines and label intersections with horizontal axis at  and ).

What is the ***total* deadweight loss** with **a total ban** on the import of jets, measured in million dollars? million.   
(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  and domestic supply with this tariff.

LABEL THE DIAGRAM: label the following areas 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)?

What is the total cost of the subsidy program to the government (in $million)?

**Import quota:** Suppose the government instead now imposes an import quota (via a system of licenses) 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:

What is the tariff equivalent of this quota? percent.

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Suppose the domestic jet industry is monopolized (i.e. a single domestic producer). Does that producer prefer a quota or its tariff equivalent? Explain why.

What do economists mean by ‘rents’ and ‘rent-seeking’? Briefly describe how a quota licensing system might lead to rent-seeking and how it might change how much deadweight loss is produced by protection. Limit answer to box.

III. (20 pts) 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? What kind of data did the study use and what were its main findings about employment and wages. Do these studies lend more support to the Hecksher-Ohlin Samuelson model, to the Specific Factors Model?

The same authors argue that the China shock also had an impact on politics. How does this evidence support or contradict economist Dani Rodrik’s views on the supply and demand for right-wing and/or left-wing populism in response to trade and immigration shocks? How, if at all can countries remain open to trade or is a protectionist ‘backlash’ against trade liberalization inevitable? (If you use any additional sheets in your answer, please indicate your name at the top of each sheet).